

Commerce / NOAA / NOS / OCS / Sanctuary Program Office



## FINAL ENVIRONMENTAL IMPACT STATEMENT

# Elkhorn Slough Estuarine Sanctuary

Proposed Estuarine Sanctuary Grant Award  
for Elkhorn Slough, Monterey County, California

**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
Office of Coastal Zone Management  
and  
**STATE OF CALIFORNIA**  
**Department of Fish and Game**  
The Resources Agency

UNITED STATES  
DEPARTMENT OF COMMERCE

FINAL ENVIRONMENTAL IMPACT STATEMENT

ELKHORN SLOUGH ESTUARINE SANCTUARY

PROPOSED ESTUARINE SANCTUARY GRANT AWARD

FOR ELKHORN SLOUGH, MONTEREY COUNTY, CALIFORNIA

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## SUMMARY

BACKGROUND

In response to the intense pressures upon and conflicts within the coastal zone of the United States, Congress passed the Coastal Zone Management Act (P.L. 92-583) in 1972, with amendments passed in 1976 (P.L. 94-370). The Act authorized a new Federal program--administered by the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce--to assist and encourage coastal States to develop and implement rational programs for managing their coastal resources. The Act affirms a national interest in the coastal zone's effective management, beneficial use, and development, and it permits the awarding of grants for the purposes of meeting these ends.

Section 315 of the Coastal Zone Management Act established the estuarine sanctuary program, which, on a matching basis, provides grants to States to acquire, develop, and operate estuarine areas to be set aside as natural field laboratories. These areas will be used primarily for long term scientific and educational purposes, which, in addition to other benefits, will provide information essential to coastal management decisionmaking. Examples of estuarine sanctuary purposes are:

- o To gain a thorough understanding of the ecological relationships within the estuarine environment;
- o To make baseline ecological measurements;
- o To serve as a natural control in order to monitor changes and assess the impacts of human stresses on the ecosystem;
- o To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems that confront them; and,
- o To encourage multiple use of the estuarine sanctuaries to the extent that such usage is compatible with the primary sanctuary purposes: research and education.

In order to ensure that the sanctuary program adequately represents regional and ecological differences, the programmatic guidelines establish a biogeographic classification scheme that reflects geographic, hydrographic, and biologic characteristics.

The Estuarine Sanctuary Guidelines, which were published in 1974 and modified in 1977, specifically authorize the granting of acquisition money in two stages: (1) an initial grant for such preliminary purposes as surveying and assessing the lands to be acquired, and for developing management procedures and research programs; and (2) a second grant for the actual acquisition of the land.

In July 1978, the State of California submitted to the Office of Coastal Zone Management a preacquisition grant application for an estuarine sanctuary to be located in the Elkhorn Slough area of Monterey County. Subsequently, OCZM awarded a preacquisition grant for \$29,438 (matched by the State), which was used for preliminary boundary determination, estimated real estate costs, a management plan, and a research/education agenda.

#### PROPOSED ACTION

The State has requested a \$1,042,000 grant from OCZM, to be matched by \$1,888,000 in State funds, for the acquisition of approximately 1,510 acres of wetlands and uplands at Elkhorn Slough, California (OCZM has no acquisition or condemnation authority). The land will be acquired by the Wildlife Conservation Board (WCB) and managed by the California Fish and Game Department (CF&G). A background study of the proposed sanctuary area has been prepared under contract to the State. The Study, Pre-acquisition Planning Study for Elkhorn Slough Estuarine Sanctuary by Madrone Associates is available from the California Department of Fish and Game, 1416 Ninth Street, Sacramento, California, 95814, Attention: Mr. Bruce Browning.

An estuarine sanctuary, as defined by the Estuarine Sanctuary Guidelines, is regarded as an ecological unit comprised of more than just a body of water. It may include transitional areas adjacent to the estuary itself, as well as upland areas that drain into the waterbody. The proposed boundary consists of primary habitat critical to the important flora and fauna, including endangered species, dependent on the slough. Included also is secondary habitat feeding directly and indirectly into the slough. The boundaries will complement, within the ecological unit, the acquisition being made by the U.S. Fish and Wildlife Service primarily on the north and west sides of the slough for a Wildlife Refuge.

The proposed sanctuary will be administered in a manner similar to that of the State Ecological Reserve System. The objective of the sanctuary will be to provide a "living laboratory" for research and educational enhancement of the natural resource values, such as habitats and biotic communities within the slough system. Multiple use of the sanctuary is encouraged as long as it is compatible with the above objective. Uses could include low-intensity recreation, hunting, fishing, and wildlife observation. Incompatible uses of the sanctuary would include diking, dredging, or manipulative research with long term impacts. Uses that would be monitored for potential impact are consumptive uses of the environment, such as the collection of flora and fauna.

Adjacent land and water usage will, of course, have impacts upon the proposed sanctuary. However, these activities are currently monitored by existing Federal, State, and local authorities, which will continue to do so. The estuarine sanctuary itself shall not require or impose land or water use planning within Monterey County outside the boundaries of the proposed sanctuary. (See Figure 2). In addition, there will be no Resource Protection Zone (RPZ) established around the proposed

estuarine sanctuary. There are no new OCZM laws in connection with the estuarine sanctuary program.

The sanctuary is to be used for research and education, which implies a multidisciplinary approach to management. Therefore, an Elkhorn Slough Estuarine Sanctuary Advisory Committee is proposed. It will consist of the following individuals, or their representatives: the Chairman of the Monterey County Board of Supervisors; the Director of the California Fish and Game Department; the Executive Director of the California Coastal Commission; the Director of the Moss Landing Marine Laboratories; the Director of the University of California Sea Grant Program; the United States Fish and Wildlife Service Western Regional Director; the Chairman of the Moss Landing Harbor District Commission; the Vice President of the Nature Conservancy, Western Regional Office; the Moss Landing Commercial Fisherman's Association; and the Property Owner's Subcommittee. The National Oceanic and Atmospheric Administration (NOAA) will participate actively with the Advisory Committee and help to coordinate State and Federal agencies, in its role as ex officio member. The Director of CF&G, or a representative, will be Chairman of the Advisory Committee.

The following are the duties of the proposed Advisory Committee:

- o To review and advise on the management plans for the estuarine sanctuary developed by CF&G;
- o To review applicants for sanctuary coordinator and staff positions, and advise CF&G prior to final selection;
- o To review and approve proposals for educational or research use and activities in sanctuary lands and waters;
- o To advise the appropriate Federal, State, or local government(s) on proposed actions, plans, and projects, including A-95 projects, dredge and fill requests, waste discharge permits, lease and sale of State-owned lands, local government zoning plans and zoning ordinances, and proposed changes to those land use plans and zoning ordinances, in particular coordinating the development of the Local Coastal Plan (LCP), since the estuarine sanctuary must be consistent with the final plan, and;
- o To enhance communication and cooperation among all interests involved in the sanctuary.

A research subcommittee and an education subcommittee will be established by the Advisory Committee to assist in management of the slough. Other subcommittees may be established by the Advisory Committee, as needed.

## ALTERNATIVES

Alternatives considered for boundaries included expansion of the proposed boundaries and the tightening of boundaries. Larger boundaries are not feasible for basically two reasons: the F&WS is acquiring lands within

the ecological unit for a National Wildlife Refuge, and there are insufficient funds for additional land acquisition. Smaller boundaries would not include the essential habitat needed for an ecological unit, and related facilities.

Alternative management structures were considered. Management by a single agency would make administration less complex but would not allow for the range of interests involved with the sanctuary. Complex management schemes were rejected in favor of a small, representative Advisory Committee with functional and interest-oriented subcommittees. As a result of comments on the DEIS, the advisory committee was expanded.

### ENVIRONMENTAL CONSEQUENCES

The most direct environmental consequences of the proposed action would be the long term assured use of the area and its resources for scientific, educational, and other compatible uses. The sanctuary would enable research and education to take place, which would further increase the knowledge and understanding of estuarine systems in California and, therefore, would provide information for improved coastal zone resource decisionmaking.

Positive impacts would include: preservation of essential wetland habitats that have greater than local significance and which are in limited supply; fish and wildlife habitat preservation, including the maintenance and enhancement of fish breeding areas of species that are important economically to commercial fishing; improved air quality from the limiting of urbanization within the sanctuary boundaries; water quality improvement from the limiting of urbanization; increased public usage through increased but controlled access; and additional scientific and educational research, which would bring substantial economic benefits to the region.

Negative impacts could include removal of approximately \$12,000 from the local tax base and removal of minimal agricultural lands and grazing lands from production.

Substantial concern was expressed during the DEIS comment period about the negative impact of the estuarine sanctuary on various land uses outside the proposed boundaries. In Part II, under "Preferred Alternatives Management," these impacts were specifically discussed. Generally, it is felt that the estuarine sanctuary proposal does not conflict with the objectives of Federal, State, and local land use plans, policies, and controls.

## PART 1: PURPOSE OF AND NEED FOR ACTION

In response to the intense pressures upon the vitally important coastal zone of the United States, Congress passed the Coastal Zone Management Act (CZMA), which was signed into law on October 27, 1972 (P.L. 92-583), and amended in 1976. The CZMA authorized a Federal grant-in-aid and assistance program to be administered by the Secretary of Commerce, who in turn delegated this responsibility to the Office of Coastal Zone Management (OCZM) of the National Oceanic and Atmospheric Administration (NOAA).

The CZMA affirms a national interest in the effective protection and development of the Nation's coastal zone, and provides assistance and encouragement to coastal States (including those bordering the Atlantic and Pacific Oceans, the Gulf of Mexico, the Great Lakes, and U.S. territories) to develop and implement State programs for managing their coastal zones. The Act established a variety of grant-in-aid programs to such States for the purposes of:

- o developing coastal zone management programs (Sec. 305);
- o implementing and administering management programs that receive Federal approval (Sec. 306);
- o avoiding or minimizing adverse environmental, social, and economic impacts resulting from coastal energy activities (Sec. 308);
- o coordinating, studying, planning, and implementing interstate coastal management activities and programs (Sec. 309);
- o conducting research, study, and training programs to scientifically and technically support State coastal management programs (Sec. 310); and,
- o acquiring estuarine sanctuaries, and areas for shorefront access and island preservation (Sec. 315).

The estuarine sanctuary program authorized by Section 315 of the CZMA establishes a program to provide grants to States, on a matching basis, for the acquisition, development, and operation of natural estuarine areas as sanctuaries so that scientists and students may be provided the opportunity to examine, over a period of time, the ecological relationships within the area. Section 315 provides a maximum of \$2,000,000 in Federal funds for each sanctuary. Guidelines for implementation of the estuarine sanctuary program were published in final form on June 4, 1974, (15 CFR Part 921, Federal Register 39 [105]: 19922-19927) and amended on September 9, 1977 (15 CFR Part 921, Federal Register 42 [175]: 45522-45523) [see Appendix I].

Sanctuaries established under this program have the dual purpose of (1) providing relatively undisturbed areas so that a representative series of natural coastal ecological systems will always remain available for ecological research and education, and (2) ensuring the availability of natural areas for use as a control against which impacts of man's activities in other areas can be assessed. These sanctuaries are to be used primarily for long term scientific and educational purposes, especially to provide information essential to coastal zone management decisionmaking. Such purposes may include:

- o gaining a thorough understanding of the natural ecological relationships within the variety of estuarine environments of the United States;
- o making baseline ecological measurements;
- o serving as a natural control against which changes in other similar estuaries can be measured, and facilitating evaluation of the impacts of human activities on estuarine ecosystems; and,
- o providing a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, and their values and benefits to man and nature.

While the primary purpose of estuarine sanctuaries is scientific and educational, multiple use of estuarine sanctuaries will be encouraged to the extent it is compatible with the primary sanctuary purpose. These uses may generally include such activities as low intensity recreation, fishing, hunting, and wildlife observation.

The CZMA and the sanctuary guidelines express the intent that ultimately the estuarine sanctuary program will fully represent the variety of regional and ecological differences among estuaries. The regulations indicate that "the purpose of the estuarine program... shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each estuarine ecosystem will endure into the future for scientific and educational purposes" (15 CFR 921.3[a]). As administered by OCZM, the estuarine sanctuary program defines 11 different biogeographic provinces or classifications, based on geographic, hydrographic, and biologic characteristics. Subcategories of this basic system will be used as appropriate to distinguish major subclasses of each biogeographic province. It is anticipated that a minimum of 21 sanctuaries will be necessary to provide adequate representation of the Nation's major estuarine ecological systems.

Between 1974 and the present, OCZM has awarded grants to establish five estuarine sanctuaries. These are:

<u>Sanctuary</u>	<u>Biogeographic Classification</u>
South Slough Coos Bay, Oregon	Columbian
Duplin River/ Sapelo Island, Georgia	Carolinian
Waimanu Valley Island of Hawaii, Hawaii	Insular
Rookery Bay, Collier Co., Florida	West Indian
Old Woman Creek Erie Co., Ohio	Great Lakes

Elkhorn Slough has long been a focal point of research and educational interests and in recent years its destiny has been the object of considerable attention. Responding to these interests, the California Coastal Commission nominated Elkhorn Slough as an estuarine sanctuary site and applied to OCZM for pre-acquisition funding, which was granted August 1978. The proposed Elkhorn Slough Sanctuary would be representative of the Californian Biogeographic Classification, further completing the series of nationwide representative estuarine systems established--as provided for in Section 315 of the CZMA. Florida has also applied for acquisition funds to be used at Apalachicola River/Bay.



## PART II: ALTERNATIVES

A. Preferred Alternative

OCZM has implemented a process whereby a land acquisition grant can be made in two phases. The first is a pre-acquisition grant for such purposes as real estate appraisals, the development of management procedures, and research/educational programs. OCZM awarded such a grant for Elkhorn Slough in August 1978. The second phase is the grant for the actual acquisition of land: the proposed action for which this FEIS was prepared.

California has submitted a land acquisition grant application for \$1,042,000 from OCZM, to be matched by approximately \$1,888,000 in State funds, for the acquisition and establishment of an estuarine sanctuary at Elkhorn Slough in Monterey County. The grant would enable California to acquire and operate an estuarine sanctuary of approximately 1,510 acres that are now privately owned, though some may be subject to the public trust. The land will be acquired by the California Wildlife Conservation Board (WCB) and managed by the California Fish and Game Department (CF&G). Upon award of the acquisition grant for the estuarine sanctuary, the State has the option of applying for matching operational funds (\$50,000/year) for a period up to three years.

Figure 1 indicates the general location of the proposed project and Figure 2 delineates the proposed sanctuary boundary. This proposed boundary includes only the south and a portion of the east side of Elkhorn Slough, since the U.S. Fish and Wildlife Service (Figure 3) is in the process of acquiring land principally on the north and west sides as a National Wildlife Refuge for the purposes of preserving endangered species habitat. The USF&WS prepared an Environmental Assessment for its proposed refuge and this FEIS relies on some of the technical data within that assessment. The proposed boundary does not include the water area within the slough, and this area will continue to be managed in trust by the Moss Landing Harbor District, which will include usage for estuarine sanctuary related research and education.

A study was prepared for the State of California as part of the pre-acquisition grant regarding the proposed estuarine sanctuary: Pre-acquisition Planning Study for Elkhorn Slough Estuarine Sanctuary by Madrone Associates. Information from this document has been incorporated extensively into this FEIS and the interested reviewer may contact the California Fish and Game for a copy (See Summary for address). Within the FEIS, this document shall be referred to as the "Madrone Study." It should be recognized that recommendations from the Madrone Study, which are within this FEIS, are those that have been accepted as appropriate for the proposed sanctuary; others, such as buffer zones, have been rejected and are not part of the proposed sanctuary.

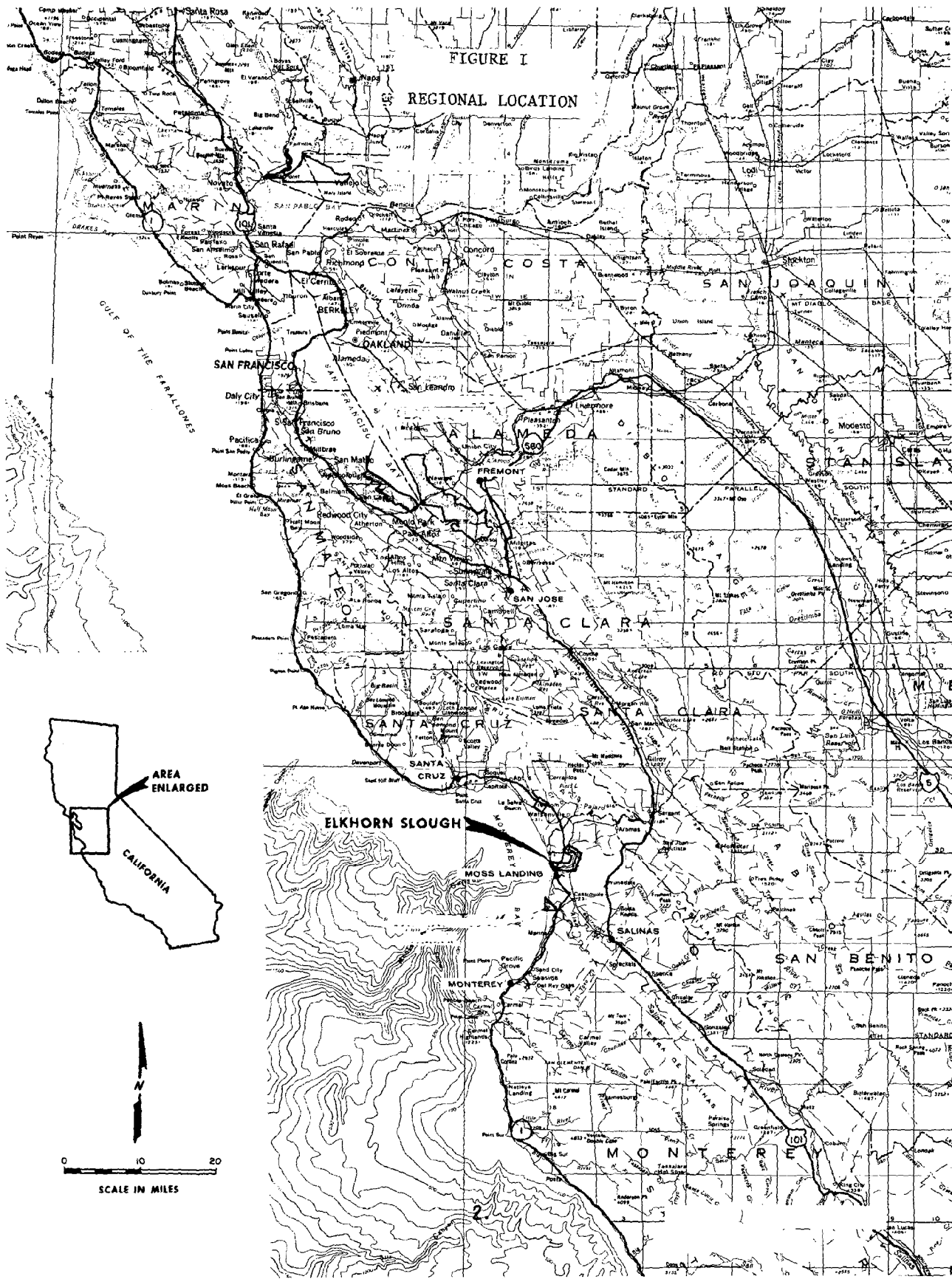
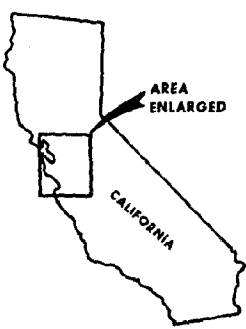


FIGURE 1

REGIONAL LOCATION



AREA ENLARGED



0 10 20  
SCALE IN MILES





## 1. Boundaries and Acquisition of Land

Boundaries, as defined by the Estuarine Sanctuary Guidelines, "may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting to the extent feasible a natural unit." The proposed boundaries of the sanctuary (Figure 2), together with the lands proposed for Federal F&WS acquisition, represent the ecological unit of Elkhorn Slough. The proposed Elkhorn Slough boundary includes areas of importance to the formation of an estuarine sanctuary, all wetlands to the mean high tides, as well as some adjacent uplands, comprising habitat lands important to wildlife and/or lands suitable for sanctuary support facilities.

In order to control land areas suitable for meeting estuarine sanctuary objectives, it will be necessary to acquire these parcels, or portions thereof. Most of these acquisitions will be below the 10' contour line, which is considered to be primarily wetlands. The properties are listed below by current ownership:

- |  |                                     |
|--|-------------------------------------|
| 1) C. C. Vierra.                           | 19) E. Arbuckle, Jr., <u>et al.</u> |
| 2) B. G. Woolpert <u>et ux.</u>            | 20) G. B. Wells <u>et ux.</u>       |
| 3) P. Calcagno <u>et al.</u>               | 21) J. Moreno <u>et ux.</u>         |
| 4) M. Minhota <u>et ux.</u>                | 22) V. R. Loghry <u>et ux.</u>      |
| 5) Granite Rock Corporation.               | 23) T. B. Landress <u>et ux.</u>    |
| 6) J. P. Dolan <u>et ux.</u>               | 24) T. B. Landress <u>et ux.</u>    |
| 7) Kaiser Aluminum Corporation.            | 25) The Nature Conservancy          |
| 8) W. L. Campoli <u>et ux.</u>             | 26) The Nature Conservancy          |
| 9) G. Searson <u>et ux.</u>                | 27) W. J. Deegan <u>et ux.</u>      |
| 10) Pacific Gas and Electric.              | 28) J. Matthews                     |
| 11) T. K. Williams <u>et ux.</u>           | 29) H. Celaya <u>et ux.</u>         |
| 12) R. Avila, wife, estate.                | 30) M. E. McCauley                  |
| 13) Father Benedictine.                    | 31) T. V. Hartsock <u>et ux.</u>    |
| 14) & 15. E. Arbuckle, J.R., <u>et al.</u> | 32) T. Silva                        |
| 16) R. Jazwin                              | 33) I. Howell                       |
| 17) W. L. Wells <u>et ux.</u>              | 34) J. P. Brannon <u>et ux.</u>     |
| 18) E. Arbuckle, Jr., <u>et al.</u>        | 35) P. A. Trundle <u>et ux.</u>     |
|  | 36) Pacific Gas and Electric        |

Ownership or comparable control by the State would fully ensure that the areas within the boundaries would be managed to meet sanctuary objectives. Land now owned by other public agencies or private nonprofit organizations could be managed by CF&G, subject to contractual arrangements ensuring management within the guidelines set forth in this FEIS and approved by OCZM. Condemnation has not been used by the Wildlife Conservation Board for 25 years, and is not intended for use of Elkhorn Slough. OCZM will not be purchasing any land and has no condemnation authority. By law, full fair market value must be paid by WCB for properties acquired.

## 2. Management

### a. General Management Requirements

The goal of the proposed estuarine sanctuary at Elkhorn Slough is to provide a natural laboratory for the study of estuarine ecological

FIGURE IV

OBJECTIVES OF THE ELKHORN SLOUGH ESTUARINE SANCTUARY PROGRAM

GOAL: TO PROVIDE A NATURAL LABORATORY FOR THE  
STUDY OF ESTUARINE ECOLOGICAL RELATIONSHIPS

A

PROTECT, MAINTAIN, ENHANCE  
AND RESTORE THE OVERALL  
QUALITY OF THE ESTUARINE  
ECOSYSTEM IN PERPETUITY.

B

PRESERVE AND MAINTAIN SLOUGH FOR ECOLOGICAL  
AND CULTURAL/HISTORICAL RESEARCH THAT WILL  
PROVIDE EDUCATIONAL KNOWLEDGE TO THE GENERAL  
PUBLIC, AND ASSIST LOCAL DECISION MAKERS IN  
DEALING WITH COASTAL DEVELOPMENT.

C

PRESERVE THE INTEGRITY OF THE EXISTING ESTUARINE  
HABITAT: THROUGH ENHANCEMENT AND RESTORATION,  
MAINTAIN OPTIMUM POPULATIONS OF MIGRATORY BIRDS  
AND INDIGENOUS FLORA AND FAUNA, WITH SPECIAL PRO-  
TECTION PROVIDED FOR RARE AND ENDANGERED PLANT AND  
ANIMAL SPECIES.

relationships. Complementary objectives of other organizations have also been incorporated into the objectives of the Elkhorn Slough estuarine sanctuary program (Figure 4). These agencies and organizations include: USF&WS, CF&G, California Coastal Commission, Wildlife Conservation Board (WCB), and the Nature Conservancy.

Multiple use of an estuarine sanctuary can be permitted as long as it does not interfere with the primary purposes of providing long term protection for natural areas so that they may be used for scientific and educational purposes. The Wildlife Conservation Board, CF&G, the Federal Coastal Zone Management Act of 1972, the California Coastal Act of 1976, and the multiple use clause of the Estuarine Sanctuary Guidelines endorse compatible and regulated recreational use of the slough.

Some of the popular recreational activities in the slough include fishing, hunting, birdwatching, and photography. At the present time, these activities are limited because of poor access, most of which is through private lands. These uses would be encouraged by increasing the kinds of access available to the general public. Compatible recreational uses in the slough should be determined and access should be designed to accommodate these uses. For example, boat access and areas for bank fishing should be considered, as well as access for hunting, and pathways and parking for nature observers.

The advantages and disadvantages associated with the provision of public access will be considered, particularly the potential impacts upon the fish and wildlife resources. Legal constraints will need to be explored, and associated problems such as parking, access control methods and enforcement, fee schedules, and other administrative factors must be evaluated. The provision of access shall not interfere with adjacent property owners' rights, or affect usage of their property.

Examples of incompatible uses in the estuarine sanctuary would be off-road vehicle use, diking, dredging, drainage, or otherwise tampering with the natural system, or causing disturbances within it (e.g. loud noise or littering). Manipulative research involving the long term degradation or alteration of the natural resource would also be prohibited. Short term manipulative research would only be performed under very strict controls and with written approval of OCZM. Examples of activities that will be monitored and controlled, if necessary, include consumptive uses of the environment, such as the collection of flora and fauna; and access as described above.

The potential exists through the goals of research and education in the Estuarine Sanctuary Guidelines for restoring natural ecosystem functions to certain parts of the slough that have been altered by past activities. Restoration may require positive actions in some cases; in other situations, removal of existing threats or conflicts may accomplish the same end. Any change in the existing system, including areas previously modified, should only be done after scientific evaluation of the consequences on the system over the long term.

Obviously, impacts on the proposed sanctuary may come from adjacent land and water uses. Examples include: agricultural erosion, use of pesticides, development that removes wildlife habitat, septic tank leachate, oil spills or the heated waste water from power plants. Such activities are now monitored and regulated by authorities under existing Federal, State, and local law. The establishment of the estuarine sanctuary itself will add no new laws (Federal or State) to regulate these impacts. The estuarine sanctuary itself shall not require nor impose any land use planning within Monterey County outside its proposed boundaries. In addition, no Resource Protection Zone (RPZ) will be established around the proposed estuarine sanctuary, nor buffer zones as described in the Madrone Study.

Due to the concerns raised by numerous persons about the effect the estuarine sanctuary will have on adjacent land usage, General Response A, "Impact of the Estuarine Sanctuary on Land Use Outside the Sanctuary Boundaries," has been included here. It is repeated in full in the Comment and Response section to follow.

#### Impact of the Estuarine Sanctuary on Land Use Outside the Sanctuary Sanctuary Boundaries

Concern about land use outside the sanctuary boundaries has been expressed within a variety of issues. These have included the buffer concept outlined in the Madrone Study for California Fish and Game, the applicability of the Resource Protection Zone (RPZ) included in the California Coastal Conservancy Act, the relationship of the Local Coastal Plan (LCP), and general concern over the restriction of private property rights, which includes residential, agricultural, and commercial. This concern also extends to control or restrictions over the commercial fishing industry and Moss Landing Harbor. It is felt that the estuarine sanctuary will have impacts on the uses mentioned above directly, or indirectly, by "getting a foot in the door."

The following describes the California Coastal Commission and the LCP process, which is legally required under California Law:

The Regional Coastal Commissions and State Coastal Commission were established under 1976 legislation, succeeding the temporary California Coastal Zone Conservation Commission's creation by a 1972 statewide initiative. In 1976, legislation was passed requiring all local (city and county) governments within the coastal zone to prepare a coastal plan consistent with existing State policies. This legislation clearly placed the primary responsibility upon the local government for the planning and implementation of the coastal zone management program. The major means of implementation is the preparation of Local Coastal Plans (LCP's) by local governments, with their review and certification by the Regional and State Coastal



Commissions. Prior to certification of an LCP, the Regional Coastal Commission will retain interim permit authority over the coastal zone. The criteria for granting or denying permits by the commissions are the policies of the 1976 California Coastal Act. After certification, the State Commission will retain limited appeal jurisdiction from locally granted permits, and criteria for granting or denying permits will be the certified LCP.

The primary element of the local coastal program is the land use plan and related implementing actions (e.g. zoning, development criteria, resource management programs, etc.). This plan will designate the location, type, intensity, and priority of land uses for the portion of the local jurisdiction within the coastal zone. Thus, the Coastal Act provides a means for determining and resolving complex land use and resource management issues by identifying how to use, or not to use, the lands and waters of the California coast. The land use plan phase for the Elkhorn Slough region of Monterey County's LCP is due to be completed by June 1980, with the implementation and final certification due by December 1980.

Because of the national and statewide interest and significance of the Elkhorn Slough Estuarine Complex, special local coastal planning efforts will be performed in the slough's watershed by Monterey County, in coordination with State and Federal resource management agencies. To assist in this planning program, special work tasks have been designed and funded by the State in Monterey County's LCP program to identify critical subwatersheds that surround the defined "ecological unit" of the Elkhorn Slough Complex. Within this special study area, much emphasis will be placed on establishing land uses based on natural as well as man-made constraints. LCP work tasks from Monterey County's North County segment, representing the summation of the data and analysis phases, are included in the FEIS Appendix. This planning will continue regardless of the decision concerning sanctuary establishment.

Land use planning is the legal responsibility of Monterey County, and an estuarine sanctuary must be consistent with the LCP. The following statement has been added to the FEIS: "The estuarine sanctuary itself shall not require nor impose land use planning within Monterey County outside the proposed boundaries."

The following describes the "Resource Protection Zone" (RPZ) in relation to the Estuarine Sanctuary. Sections 31300-31303 of the Coastal Conservancy Act of 1976 provide the intent of the California Legislature to establish buffer areas to be known as "Resource Protection Zones" surrounding public recreational and natural areas in the coastal zone, including fish and wildlife preserves. The purpose of the RPZ proposals was to identify resource areas susceptible to adverse impacts and protect them by appropriate land use plans and ordinances (via the Local Coastal Program process--Coastal Act 1976) or by acquisition, dedication, easement, development rights, etc. It was the intent of this legislation to have the Coastal Conservancy Commission request Federal agencies that own or operate public resource areas in the coastal zone to take appropriate action to establish RPZs around such areas.

The RPZ concept, as it applies to the proposed Elkhorn Slough Estuarine Sanctuary, is as follows:

1. The Department of Fish and Game does not own any land in Elkhorn Slough at present, and has not prepared, nor will it prepare, a plan for an RPZ at Elkhorn Slough. (Preparation of an RPZ would have required that land acquisition must have closed on escrow by January 1, 1979.)
2. The Department of Fish and Game recognizes that most existing uses surrounding the proposed sanctuary are either compatible, or will be planned for under existing regulations within the Coastal Act of 1976.
3. The U.S. Fish and Wildlife Service does not own any land at Elkhorn Slough at present; hence, it did not, and will not, prepare an RPZ plan for the area.
4. The policy of the California Coastal Commission, at present, is that wherever Resource Protection Zones (RPZ's) are not identified, local jurisdictions (Monterey County) will analyze and identify--through the LCP process--appropriate land use activities and resource protection boundaries around State, local, or Federal resource areas such as estuarine sanctuaries or ecological reserves. Also, the California Coastal Commission currently supports legislation that would delete the RPZ requirement from the Coastal Conservancy Act.

The following statement has been added to the FEIS: "there will be no RPZ established around the proposed estuarine sanctuary."

Activity associated with oil and gas exploration, development, and future transportation could pose potential adverse impacts on wetland resources of Monterey Bay. Analysis of such impacts will be included in the OCS #53 E.I.S., as well as tasks within the LCP being prepared by Monterey County, and the tasks within the Coastal Energy Impact Program (C.E.I.P.) of the Association of Monterey Bay Area Governments.

The "buffer zones" that were included in the Madrone Study are not incorporated into the estuarine sanctuary proposal. It has been concluded by OCZM and California Fish and Game that any planning, outside the proposed boundaries, is the proper function of other agencies--most notably Monterey County.

Since the State Ecological Reserve status is similar to and has objectives parallel to those of an estuarine sanctuary, it is proposed that the sanctuary be administered under this section of the Fish and Game Code for educational and research purposes. California Statute 1968, Chapter 1257 (Appendix 3) states that ecological reserves are established for the protection of wildlife organisms or specialized habitat types--both terrestrial and aquatic. The CF&G, may obtain by purchase, lease, gift, or otherwise, land and water intended for the protection of ecological resources.

General policies should be drawn up with respect to the use of the sanctuary and to the role of each agency or organization in the sanctuary management. Items such as issuance and enforcement of permits, policing of area, approved short-term habitat manipulation, operation of information center, supervision of research programs, etc., must be identified and assignments of responsibility made. As a general rule, agencies with existing authority and responsibility in a given area would retain that responsibility, and every effort should be made to avoid jurisdictional conflicts. The lead agency (Department of Fish and Game) should function primarily as a manager and as a coordinator or "clearinghouse," and, with the assistance of the Advisory Committee, should ensure through close coordination that a given problem is handled by the agency that has primary responsibility for that problem. The lead agency, with the assistance of the advisory committee, shall prepare a basic list of prohibited, permitted, or restricted uses within the sanctuary.

Local landowners, who are represented on the advisory committee, should always be consulted with respect to proposed actions that might affect their interests. The Chairman of the Monterey County Board of Supervisors is included on the sanctuary advisory committee and will also represent local landowners and other local interests.

The management objectives of the proposed sanctuary, for research, fall within two functional categories:

1. Setting research priorities in terms of subject area (objects of investigation). These priorities include:
  - o gaining further understanding of the slough ecosystem itself;
  - o gaining a better understanding of the relationship between the slough and surrounding land and water uses for future planning and management decisions; and,
  - o monitoring actual use of the sanctuary with respect to potential impacts.
2. Coordination of research activities and facilities for carrying on research in the future.

Research needs are addressed quite well in the Madrone Study and the interested reader is referred to this document for more detail.

For education, the proposed sanctuary's management objectives are:

1. To provide for sufficient access to various parts of the slough so that small groups or individuals may observe at relatively close hand, or have direct contact with, the water, mudflats, vegetation, and animals that inhabit these areas of the slough.
2. To develop and maintain for visitors a center with interpretive and instructional displays and materials that supplement the direct field experience of casual visitors or classes.
3. To encourage informal use of the slough, e.g. by trail or boat, for educational purposes or for nature appreciation, though control should be exercised over location and intensity of use of access points or facilities.
4. To provide interpretive services by staff, aids, interns, or volunteers for visitors wishing assistance.
5. To provide coordination and public information with respect to educational opportunities and facilities in the sanctuary.
6. To present occasional special public events on topics selected in conjunction with the research program, and periodic special guided field trips.

As with the research program, the Madrone study is suggested for further reading.

#### b. Administration of the Sanctuary

The proposed management agency for the sanctuary will be the California Department of Fish and Game. CF&G was established to administer and enforce the Fish and Game Code. The Department is empowered to review projects and recommend conditions for any activity proposed within inland waterways, and must be notified prior to any such action. Department authority is not restricted to a specified tide level in estuarine waters but may overlap the jurisdiction of other agencies, including the State Lands Commission and the U.S. Army Corps of Engineers. The CF&G is the major natural resource management agency within the State for lands similar to those in an estuarine sanctuary.

However, since CF&G will own and manage a portion of the entire Elkhorn Slough ecosystem and the USF&WS will own and manage another portion, a joint management coordination effort is obviously needed. The estuarine sanctuary guidelines indicate that, "where federally owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies." Therefore, when the State of California initiates actual management of the proposed sanctuary, OCZM will request the State to initiate "coordinated management policies" with the USF&WS for the Elkhorn Slough ecosystem. The purpose of the "coordinated management policy" shall be to establish a uniform management policy that will eliminate conflicts over permitted and non-permitted uses within the individual boundaries and thus allow the independently acquired portions of slough to be managed as a complete system.

The estuarine sanctuary program is somewhat different from the majority of natural resource acquisition protection programs in that the areas are also expected to be "managed" for research and education. Thus, the establishment of an estuarine sanctuary necessarily implies a multidisciplinary approach to usage of the area not only for research and education, but also for dissemination of the research findings to decisionmakers. To assist in this effort, an Elkhorn Slough Estuarine Sanctuary Advisory Committee is proposed and is to be comprised of the following members, or representatives: the Chairman of the Monterey County Board of Supervisors, the Director of the California Fish and Game Department, the Executive Director of the California Coastal Commission, the Director of the Moss Landing Marine Laboratories, the Director of the University of California Sea Grant Program, the U. S. Fish and Wildlife Service Western Regional Director, the Chairman of the Moss Landing Harbor District, the Vice President of The Nature Conservancy's Western Regional Office, the Moss Landing Commercial Fisherman's Association, and the Property Owners Subcommittee. The Property Owners Subcommittee will be composed of a representative from agriculture, industry, and residential property owners. These representatives will be

chosen by the Monterey County Board of Supervisors and the subcommittee will select its representative to the Advisory Committee. (See Figure V). The National Oceanic and Atmospheric Administration (NOAA) will participate actively with the Advisory Committee and will help to coordinate State and Federal agencies in its role as ex officio member.

The duties of the proposed Advisory Committee would be to:

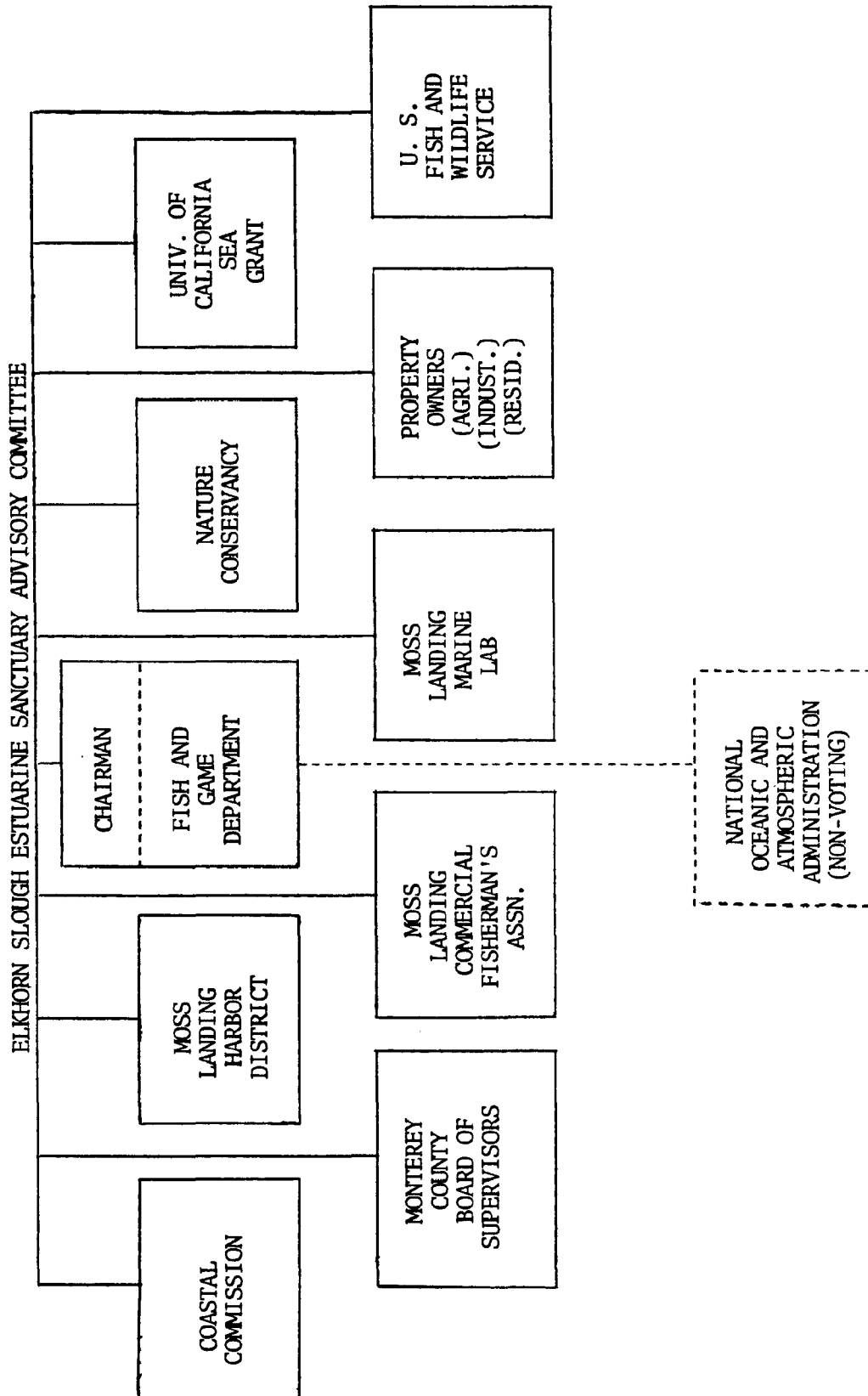
- o Review and advise on the specific management plans for the estuarine sanctuary developed by CF&G;
- o Review job qualifications, and applicants for sanctuary coordinator/staff positions, in addition to advising CF&G prior to final selection;
- o Review and approve proposals for educational or research use and activities in sanctuary lands and waters;
- o Advise the appropriate Federal, State, or local government on proposed actions, plans, and projects in, adjacent to, or affecting the sanctuary. Such projects, actions, and plans include A-95 projects, dredge and fill requests, waste discharge permits, lease and sale of State-owned lands, local government land use plans and zoning ordinances, and proposed changes to those land use plans and zoning ordinances. One particular duty will be participating in the development of the LCP, since the estuarine sanctuary must be consistent with the final plan; and,
- o Enhance communication and cooperation among all interests involved in the sanctuary.

A research subcommittee and an education subcommittee will be established by the Advisory Committee to assist it in management of the slough. Other subcommittees may be created by the Advisory Committee as needed.

As the manager for the sanctuary's lands, the California Department of Fish and Game will be responsible for the day-to-day administration of the estuarine sanctuary. To assist in this task, CF&G, at a minimum, will hire a full-time sanctuary coordinator to be located in the Elkhorn Slough area. The duties of the sanctuary coordinator, who will be trained as a resource manager, will include:

- o Administering the sanctuary, including preparing required State and Federal grant applications, proposals, budgets, and reports and maintaining necessary records;
- o Serving as staff to the Sanctuary Advisory Committee;

FIGURE V



- o Representing the Sanctuary Advisory Committee in public meetings;
- o Upon request, advising and coordinating units of government on particular issues, questions, or projects, and their impacts on or relationship to the sanctuary;
- o Coordinating all special studies and research activities within or related to the sanctuary, and interpreting and applying research results to produce benefits of a general nature;
- o Developing and overseeing the educational program for the sanctuary;
- o Reviewing all proposed activities within the sanctuary for consistency with the management objectives; and,
- o Coordinating all projects and taking appropriate action on activities that might affect the sanctuary.

The Sanctuary Coordinator will be hired by and held accountable to the Department of Fish and Game.

#### **B. Alternatives Considered**

##### **1. Funding**

During the development of its application, California considered a variety of possible funding sources. These included:

##### **Federal Acquisition**

Pittman-Robertson Fund  
Dingell-Johnson Act  
Migratory Bird Conservation Fund  
Land and Water Conservation Fund  
Estuarine Sanctuary Program

##### **State Acquisition**

Bond Act Monies of 1974 and 1976

California annually receives funds from the Pittman-Robertson Fund and the Dingell-Johnson Act. However, these funds are used for wildlife habitat restoration and fish habitat restoration, respectively. These funds generally are used for manipulative management programs, which may not be entirely compatible with sanctuary objectives. Similar considerations apply to the Migratory Bird Conservation Fund, as the objectives are somewhat different. The Land and Water Conservation Funds (from a State matching grant program) are generally appropriated



for projects that provide more recreational usage of the land. However, even if other Federal funds were available, such funding potentially would not meet the explicit needs and objectives of the estuarine sanctuary program.

California has established Elkhorn Slough as one of five wetlands projects for which State funds (Bond Act Monies) have been appropriated under AB 2133 (Chapter 462, Statutes of 1976). None of the other areas that were considered as potential estuarine sanctuaries were listed; hence no State funds were available for other sites. Although the State is contributing more than the 50 percent matching funds required, it could not, by itself, purchase all the area proposed for acquisition. The proposed sanctuary has received extensive State and Federal review during development, and no other agency has expressed the ability to provide funding for acquisition.

The estuarine sanctuary program is basically one of Federal response to a State initiative. Therefore, the alternatives for OCZM action are limited. OCZM could accept the application as presented or request modification but award a grant in either case, or it could refuse to accept the application and decline the grant. OCZM has worked with California since interest in the program was first expressed in 1974, and has suggested some modifications to the proposal. There is no reason to delay the grant to await other proposals for sanctuaries in the Californian biogeographic region since there are no other States within this region.

Unless the application lacked merit, the outright refusal to award a grant would serve no purpose. Indeed, in view of the wide need for estuarine preservation (e.g. National Estuary Study, 1970 and Ketchum, 1972), such action would be contrary to the public interest.

## 2. Site Selection

Since the sanctuaries are to be State-owned and managed, OCZM cannot unilaterally initiate, propose, or designate an area as a sanctuary. OCZM is dependent upon States to identify potential sanctuary sites and formally apply for funds.

In 1973, the California Coastal Conservation Commission began working on nominating areas as an estuarine sanctuary. The original nominations were included as part of the Coastal Plan of 1975, which received considerable public review. Following passage of the Coastal Act of 1976, the Commission established an Estuarine Sanctuary Selection-Review Committee, which established criteria for the final selection process of the nominations. In October 1977, a Coastal Commission staff report suggested that, on the basis of a preliminary study, the Esteros Americano and de San Antonio in Marin and Sonoma County might be the best nomination for a Federal estuarine sanctuary in California. Little support was received for this area and in February 1978 the California Coastal Commission approved the nomination of Elkhorn Slough as an estuarine sanctuary at a public

hearing in San Francisco. Among the compelling reasons for the selection was the expressed need for applied wetland and estuarine research in California, and the suitability of Elkhorn Slough for such research. Another factor was that State funds, which are required to match Federal funds, were only appropriated for Elkhorn Slough.

### 3. Boundaries

Alternate boundaries that were examined include:

- a. The areas on both sides of and running the length of Elkhorn Slough, including the waters.
- b. Expansion of the boundaries to include additional land within the watershed to provide additional protection.
- c. Smaller boundaries.

The original nomination included the entire ecological unit--mostly unaltered and modified wetlands--on both sides of the slough. Further investigation revealed that sufficient funds were not available for all lands originally proposed, and that the USF&WS was initiating acquisition in several areas on the north, west, and a part of the east side of Elkhorn Slough for protection of rare and endangered species.

Water areas are normally included within estuarine sanctuary boundaries. Elkhorn Slough waters are under the jurisdiction of the Moss Landing Harbor District and other State and Federal regulatory agencies, and hence are not included in the proposed boundaries. However, the waters are invaluable from a research and educational perspective and will be utilized under a cooperative agreement with the MLHD, or other agencies exercising control of the water areas.

Also examined was an alternative to include additional up-lands in order to assure preservation of the immediate watershed areas. This would be highly desirable from an ecological standpoint; however, only limited funds are available. It also is known that certain local and State regulatory agencies have already recognized the ecological values of the Elkhorn Slough complex and are legally required to plan accordingly.

The alternative of having smaller boundaries for the sanctuary was given little consideration because it would have entailed the omission of critical habitat, land for access sites, and land for related facilities needed for a manageable unit.

#### 4. Management

One management alternative considered was to have just the CF&G manage the area without the establishment of an advisory committee. The advisory committee as proposed may administratively prove to be a more awkward organizational form than management by a sole agency, such as CF&G, but this awkwardness is offset by the fact that the proposed committee structure will provide a coordination mechanism for the array of Federal, regional, and local interests that have a concern with management within the slough boundaries.

Another management alternative considered was to have additional members of the Advisory Committee and additional subcommittees. After examination of the comments on the DEIS, additions were made to the Advisory Committee to include important user groups.

#### 5. No action

Under this alternative, Elkhorn Slough would not be acquired as an estuarine sanctuary.

This alternative would leave the future of Elkhorn Slough with various regulatory bodies attempting to protect the slough under existing authority, and partial ownership by the U.S. Fish and Wildlife Service as a wildlife refuge. Future development could lead to a deterioration of the ecological values of one of California's last remaining relatively natural estuaries. The effect on the endangered species, indigenous fish and wildlife, or shellfish nurseries could be very harmful under the no action alternative.

As mentioned previously, unless there are serious defects in the application, the no action alternative would be contrary to the State and Federal goals of preserving representative estuaries within the coastal zone of the United States.

### PART III: ENVIRONMENTAL CONSEQUENCES

#### A. Environmental Impacts of the Proposed Action

The grant from OCZM will enable the State of California to acquire certain lands adjacent to Elkhorn Slough for use as an estuarine sanctuary. Impacts from the creation of this sanctuary will be both beneficial and adverse. The most direct environmental benefit of this action will be the long term assured use of the area and its resources for scientific, educational, and other compatible purposes.

The sanctuary, as a base for education and research, should enrich our understanding of estuarine ecosystems and resources; this increasing awareness is an essential element of the State's coastal zone management program. A sound scientific base and a controlled, long term monitoring program should improve the capability of such management programs to cope with the issues and conflicts that occur in the California coastal zone. The sanctuary, which has been carefully chosen as a representative estuary for the Californian biogeographic region, will provide such a baseline estuarine system. Furthermore, this sanctuary should provide basic knowledge necessary for a more complete understanding of estuarine biological and physical dynamics.

The proposed educational program will increase public knowledge and awareness of the complex nature of estuarine systems and their problems and will therefore contribute toward increased public understanding and acceptance of coastal zone management activities.

##### 1. Natural Environment

###### a. Fish and Wildlife Habitat

Fish and wildlife depend upon a biological system that provides feeding, nesting, and nursery areas for many species, both migratory and resident. Elkhorn Slough possesses such a system and also supports three endangered species, e.g. the brown pelican, the California Least Tern, Santa Cruz long-toed salamander, and the California clapper rail; however, only the latter species has been seen on lands proposed for OCZM grant acquisition. (Appendix III is a compendium of the birds, fish, plants, animals, and shellfish found in the area.)

The sanctuary would have a positive impact by preserving one of the highest quality ecosystems remaining in the California coastal zone. Potential impacts caused by increased visitor use will be controlled by careful management.

b. Air Quality

The proposed sanctuary area currently has relatively good air quality. The establishment of an estuarine sanctuary would have a positive impact by limiting urbanization in the proposed sanctuary, although the area proposed for the sanctuary contains little land that could be urbanized, even under present regulations. There would be no impact from the proposed sanctuary upon air quality standards outside the proposed boundaries, since there are set by other agencies.

c. Water quality

In the past, water quality in Elkhorn Slough deteriorated because of such problems as untreated sewage flows and agricultural runoff. The estuarine sanctuary will have a positive impact upon water quality since such pollution will not occur on lands acquired for the proposed sanctuary. The sanctuary will also assist local and State agencies with water quality data needed for effective decision-making. Opening of dikes to restore tidal action in former marshlands will have a positive impact on water quality since the creation of more tidal marsh acreage will improve the "natural" waste treatment capacities that such tidal marshes provide.

d. Mineral Reserves/Archeological Sites

Protection of the area will mean that mineral reserves in the area (if any) will not be fully utilized. Currently, however, there are no known minerals of commercial quantity within the slough. Historic Indian "middens" and other historical sites will not be subject to development pressures and will be protected for future study.

e. Agricultural Lands

Establishment of an estuarine sanctuary will result in the loss of some agricultural lands (approximately 100 acres) and grazing lands (approximately 600 acres). Agricultural lands adjacent to the slough will provide a functional buffer from human activities and disturbances, and will continue to be used as extended habitat by animals of the slough ecosystem. Certain agricultural uses do affect the Elkhorn Slough water chemistry. However, the water area is not included within the proposed boundaries and the proposed sanctuary shall not impose any land use or water quality requirements upon agricultural uses outside the proposed boundaries. Recognizing the importance of agriculture, it has been added to a property owners subcommittee which is discussed in detail elsewhere.

## 2. Human Environment

### a. Residential/Industrial/Commercial

The owners of land within the proposed boundaries will be affected by the acquisition of their property. All acquisition will be performed in accordance with the Real Property and Uniform Relocation Act, P.L. 91-646, which guarantees fair negotiations with property owners, including compensation for relocation expenses when residences or businesses are acquired. However, actual relocation will be involved for one parcel only. NOAA and the State are cognizant of the fact that certain property owners may have "roots" to their land. All reasonable attempts will be made by the State to ensure that acquisition is as nondisruptive as possible to the property owners. The Wildlife Conservation Board does have condemnation authority, but, as a matter of policy, does not use it. Property owners adjacent to the sanctuary will not be negatively affected by the proposal as outlined in the previous "Management" section. To ensure cooperation and minimize conflict, industrial and residential property owners are included on the Sanctuary Advisory Committee, Property Owner's Subcommittee.

Two large industrial facilities are located on the south side of, and one is adjacent to, the proposed sanctuary boundary. Pacific Gas and Electric (PG&E) has operated major electrical generator and transmission facilities adjacent to the proposed sanctuary since 1950: seven large generating units plus 5,750,000 barrels of fuel storage, switch yards, transformers, and extensive transmission lines. PG & E has increased its fuel storage capacity by constructing five new storage tanks between Dolan Road and Elkhorn Slough. Currently, PG & E has an easement for transmission lines across lands proposed for acquisition. The use of this easement for transmission lines would most likely require an Environmental Impact Review under the California Environmental Quality Act. If there were no adverse environmental impacts, the expansion would be allowed within the estuarine sanctuary. Kaiser Refractories, the other large industrial facility in the region, will not be affected. We fully recognize the valuable economic contributions made by both PG & E and Kaiser to the citizens of Monterey County, and the State of California. The estuarine sanctuary will not affect the continued operation of these facilities and PG & E's and Kaiser's operations at Moss Landing are not incompatible with the estuarine sanctuary. Recognizing this, "industry" has been added to the proposed Estuarine Sanctuary Advisory Committee, Property Owners Subcommittee. Commercial mariculture operations are discussed later under the "Moss Landing Harbor District".

### b. Public Use

Currently, public use of the slough consists of photography, biological studies, fishing, birdwatching, clamming, and limited waterfowl hunting. These uses are compatible with the estuarine sanctuary and, with the exception of hunting, can be expected to increase in the future, thus providing positive public benefits. Hunting, which has been declining over recent years, is not precluded by estuarine sanctuary

designation, though it could be controlled in certain areas, such as those that contain nesting or loafing areas for rare or endangered species, or in ongoing research sites.

The sanctuary would also have a positive impact upon the above public use activities by providing additionally needed public lands and managed access sites for usage, thereby reducing trespassing on private property.

#### c. Scientific and Educational Use

The additional access sites and public lands will also have positive impacts upon the educational and scientific uses of the area. At the present time, there are several universities and two marine laboratories that use the slough for educational and research work. The institutions involve about 700 students each at the slough, and high schools and elementary schools bring another 2,000 students. This usage will increase as a result of the estuarine sanctuary.

It is estimated that substantially more than \$1 million is spent annually on research directly related to Elkhorn Slough. The dollar amount and number of researchers using the slough is expected to be increased substantially if an estuarine sanctuary is established. The Sea Grant program, which recently funded a joint proposal by the University of California, Berkeley, and Moss Landing Marine Laboratories for a two-year study of certain development impacts on the ecology of Elkhorn Slough, is particularly expected to increase funding to estuarine related projects as a result of estuarine sanctuary status. There has even been a college course proposed, through Moss Landing Marine Laboratory, to focus on the management, research, and educational aspects of Elkhorn Slough, if it is established as an estuarine sanctuary.

A very important economic factor attributable to the slough is the value of research and education to the local economy. For example, the additional students who would attend the Moss Landing Marine Laboratory, should an estuarine sanctuary be designated, will rent housing, purchase groceries, buy gasoline, etc., from regional merchants. If a multiplier effect of 3.0 is estimated (O'Connor and Sharna, 1976) for the value of educational services, the impact is substantial. For example, if 20 additional students attend Moss Landing Marine Laboratory and spend \$5,000/year each, this would mean an additional \$300,000 spent within the regional economy ( $20 \times \$5,000 \times 3.0$ ).

The same type of analysis would also apply to the operation and management of the estuarine sanctuary. The State has the option of applying for \$50,000 from OCZM, matched by \$50,000 from the State, to be used for operation and management of the estuarine sanctuary. This yearly management budget of \$100,000, through the multiplier effect, would be expected to provide \$300,000 in additional income into the local economy.

#### d. County Tax Loss

The acquisition of approximately 1,510 acres will result in a negative impact on county real estate tax-revenue. It is estimated that roughly \$12,000 yearly will be foregone through the sanctuary's establishment. However, the existence of an estuarine sanctuary could have positive impacts upon the value of lands adjacent to the sanctuary. As the amenities of the estuary are preserved, the adjacent properties may become more desirable and valuable. This situation has been documented in a classic study of a regional park in Pennsylvania (Hammer, et al., 1974).

It is virtually impossible to accurately predict if the economic gains will eventually negate the tax loss. OCZM feels this will probably be the case; however, if not, the loss will be an actual negative impact caused by the sanctuary on the receipts of property tax dollars.

The net environmental impact of an estuarine sanctuary in Elkhorn Slough will be to encourage a productive and harmonious relationship between man and his environment. Protection of the estuary for long term educational and scientific uses should stimulate a more thorough examination and understanding of the relationships between man's activities and his environment. Additional positive economic impacts could include: long range protection of commercial fishing through preservation of estuarine nursery areas; and proximity of a National Wildlife Refuge/ Estuarine Sanctuary to provide an economic stimulus to boost and diversify the local economy through visitor-generated revenue.

### 3. Adverse Environmental Effects Caused by Alternatives to the Proposed Estuarine Sanctuary

The alternatives previously discussed, except for the no-action alternative and the alternative of locating the sanctuary elsewhere, would not significantly change any of the environmental impacts that were outlined in the preceding section. If the no-action alternative were chosen, the net benefits discussed above would be foregone. If another site were chosen, the benefits of the sanctuary at the Elkhorn Slough system would be foregone, and would accrue at the other location.

#### B. Unavoidable Adverse Environmental or Socioeconomic Effects

There are no unavoidable adverse environmental effects from the proposed sanctuary. Unavoidable socioeconomic effects would include the potential loss of tax revenues (\$12,000) to the county through public acquisition, lost opportunities for agricultural, limited residential, or commercial development, and the potential of having fewer areas open for hunting.

#### C. Relationship Between Short Term Uses of Man's Environment and the Maintenance of Long Term Productivity

While establishment of the proposed estuarine sanctuary will restrict some local short term uses of the environment, it will also provide long term assurance that natural resources and benefits of the area will be available for future use and enjoyment. Without sanctuary designation,



intense short term uses and gain, such as residential or commercial development, might be realized. However, such uses would most likely result in lost benefits because of degradation of the local environment, and higher public costs for services. Without land use controls, the traditional conflicts between residential, commercial, industrial, and wildlife estuarine users could be expected to intensify. The Local Coastal Planning process being developed by Monterey County is expected to develop a land use plan and process for resolving these use conflicts.

Research information derived from the estuarine sanctuary over the long term will assist in the coastal management decisionmaking process, and public education will provide a basis for the wise use of the remaining estuarine resources. These results, which could apply to other estuarine areas in California, will help avoid conflicts and mitigate adverse impacts caused by man's activities in the coastal zone.

#### D. Irreversible or Irretrievable Commitments of Resources

Within the proposed sanctuary, there are no resources that will be irreversibly or irretrievably lost, since the resources will be protected, and managed, not destroyed or removed. However, as the intent of this action is to provide permanent protection of the estuary and adjacent lands, in practice, agriculture and the harvesting of mineral resources will not occur, with the possible exception of specific research projects.

#### E. Possible Conflicts Between the Proposed Action and the Objectives of Federal, State, Regional, and Local Land Use Plans, Policies, and Controls for the Area Concerned

Appendix V details specific information concerning the principal agencies involved in Elkhorn Slough. The following elaborates on those major agencies that have a present interest in the area.

##### 1. Federal Agencies

As stated previously, the USF&WS has conducted an Environmental Assessment of the Elkhorn Slough area and has determined that it qualifies as a National Wildlife Refuge in order to protect the habitat for endangered species, under the authority of the 1973 Endangered Species Act.

NOAA/OCZM is currently considering (in cooperation with the State) the designation of a Marine Sanctuary in Monterey Bay. In April 1979, the California Coastal Commission requested that NOAA/OCZM prepare an Environmental Impact Statement (planned for Fall, 1979) for a proposed Marine Sanctuary within Monterey Bay. The proposal for two types of sanctuaries in the Elkhorn Slough/Monterey Bay region has generated substantial confusion. Although both programs are resource protection oriented, the differences in their establishment mechanisms and purposes are quite distinct.

The proposed estuarine sanctuary, under consideration in this FEIS, and the proposed Monterey Bay Marine Sanctuary should be evaluated separately and judged individually on their relative merits. The establishment of an estuarine sanctuary in no way assumes the later establishment of a marine sanctuary. A brief comparison of the two programs is listed in Appendix VI.

## 2. State Agencies

The State Lands Commission has jurisdiction over all State-owned public lands. These include all lands that lie beneath navigable waters or have lain beneath navigable waters from 1850 until the present, such as tidelands and submerged lands. Federal Government grants of swamp lands, school lands, and other acquisitions also fall under the State Lands Commission's jurisdiction. Although the ordinary high water mark is used to define the upper range of ownership for tidal lands, historic line determinations falling below this mark are typically honored. The responsibilities of the State Lands Commission in the administration of State lands include selling or leasing the lands for oil, gas, and mineral extraction; grazing and agriculture; and other commercial and recreational interests. The Commission is currently conducting a determination of its jurisdictional boundaries at Elkhorn Slough.

The California Coastal Commission, Central Coast Region was created by the Coastal Act of 1976 to plan for the rational use of the California coast. Because of the national and statewide interest and significance of Elkhorn Slough, special local coastal planning efforts will be necessary and will be carried out in the Elkhorn Slough watershed by Monterey County in coordination with State and Federal management agencies. This planning will occur regardless of the decision concerning sanctuary establishment. To assist in this planning program, special work tasks have been designed and funded by the State--in Monterey's Local Coastal Planning (LCP) program--to identify critical subwatersheds that surround the defined ecological unit comprising the Elkhorn Slough ecosystem. The primary elements of the LCP are the land use plan and the implementing actions (e.g. zoning, development criteria, resource management programs, etc.). Each coastal city and county must develop such an LCP under mandate of the 1976 Coastal Act, which provides the means for determining and resolving such complex land use and resource management issues as exist at Elkhorn Slough. The land use plan phase for the Elkhorn Slough region of Monterey County's LCP is due to be completed by June 1980, with implementation and final certification by the California Coastal Commission due by December 1980. Once an LCP, which can include Federal managed areas (national wildlife refuges) as well as State managed areas (ecological reserves, estuarine sanctuaries, etc.), has been certified, local permit decisions can still be appealed for specific projects. In the Elkhorn region, permit appeal authority to the State Coastal Commission will always be retained for all developments within 100 feet of wetland/estuarine areas and streams, as well as over all public trust lands. The estuarine sanctuary will have to be certified by Monterey County in conjunction with its LCP.

The California Department of Transportation (CALTRANS) has various plans to replace, realign, or upgrade to freeway status the existing Highway 1. Its realignment has not been proposed for funding in the short range plan, but it is still in the long range plan. There exist U.S. Department of Transportation Highway Acts regarding the crossing of lands that have been designated for protection by certain Federal or State agencies. Since Elkhorn Slough has been designated both by the State for aquisition as a State Ecological Preserve using bond act monies and by the U.S. Fish and Wildlife Service as a wildlife refuge, the provisions of these acts must curenly be adhered to. Therefore, OCZM will not intervene in any decisions reached by the appropriate State agencies regarding the alternatives for replacement of the existing Highway 1 bridge, realignment of Highway 1, or future freeway status of Highway 1.

It is concluded that the estuarine sanctuary does not conflict with State plans and policies. The sanctuary supports the policies of the California Resources Agency.

### 3. Local Agencies

The Monterey County Planning Department is responsible for administrative decisions involving planning, zoning, and development in the county. Recommendations involving more significant planning actions are forwarded to the Planning Commission and Board of Supervisors for further action. The department is also responsible for preparation of the local coastal plan for the North County segment of the Monterey County LCP, which includes Elkhorn Slough. Because of these responsibilities, Monterey County has the "lead" for all planning, zoning, and development adjacent to Elkhorn Slough.

In 1973, a revised area development plan was prepared for the Monterey County Planning Commission. This plan generally restricts industrial development for the Moss Landing area to the south side of the slough between Highway 1 and the Southern Pacific Railroad. Some of its details include limiting the passage of boats or barges into the eastern portion of the slough and eliminating deepwater barging; and it also proposes retention and reconstruction of the existing low bridge for shoreline access. The main reason expressed for limiting the deepwater harbor uses was economic infeasibility. Factors included in this assessment were an inadequate supply of fresh water, sewage disposal problems, and other environmental concerns.

The 1956 Monterey County Master Plan endorsed commercial use of the slough. However, preliminary work on the LCP reveals that the county now considers preservation of the environmental qualities and biological resources of the slough to be of primary importance.

Moss Landing Harbor District was established in 1947 as a political subdivision of the State of California. The passage of Senate Bill 1116 granted the trust title of Elkhorn Slough "Tidal" lands to the Moss Landing Harbor District. The district, which shares jurisdiction over the area with the State Lands Commission, is authorized to regulate and monitor commerce, fisheries, and navigation in these tidal lands and will continue to do so. No adverse impact on the sanctuary is expected from existing commercial and navigational usage of the slough.

Questions have been raised regarding the sanctuary's impact upon expansion of the harbor, or activities within it. The sanctuary itself will have no negative impact upon the proposed expansion plans of the MLHD (this assumes that expansion into the slough east of Highway 1 is not an alternative). Similarly, the sanctuary will not affect activities within the harbor, such as fueling of, or sanding boats. However, this does not mean there are no existing State or Federal laws that regulate activities within the harbor; it means only that the sanctuary itself cannot legally perform this function. The estuarine sanctuary cannot and shall not hinder commercial fishermen, or any of their support facilities.

At the present time the MLHD has leases issued to Pacific Mariculture and International Shellfish. The MLHD will continue to exercise authority over these leases and receive the income for these leaseholds. Although the existing operations are outside the proposed sanctuary boundaries, they appear to be compatible with the estuarine sanctuary, and the research being performed in the "farms" upon this leased territory could in fact be quite valuable for estuarine sanctuary related research. NOAA/OCZM and California Fish and Game support the goals of the mariculture industry.

The Nature Conservancy is a national, nonprofit organization that promotes conservation through the acquisition and protection of ecologically valuable land. Some acquired land is transferred to appropriate governmental agencies, or leased to schools or universities, for further protection and/or research and educational activities. Remaining lands are used as nature preserves and retained by the Conservancy and managed for scientific and educational purposes.

The Nature Conservancy owns approximately 200 acres within the proposed boundaries. The Conservancy has indicated that it desires to sell its holdings to the State to be incorporated into the proposed estuarine sanctuary.

## PART IV: AFFECTED ENVIRONMENT

A. General Description

Elkhorn Slough is located on Monterey Bay, roughly at the midpoint between the cities of Santa Cruz and Monterey. Originally an arm of a large estuary at the mouth of the Salinas River, Elkhorn became a tidal slough when the river changed its course to the south in 1908. Now stabilized, Elkhorn opens into the bay's Monterey Submarine Canyon at Moss Landing, a small, marine-oriented community. Two hundred thirty yards wide and about 15 feet deep at its lower end (Nybakken, 1977), the slough curves east and north for approximately seven miles, draining the hilly uplands and cultivated marine terraces that lie between the Pajaro and Salinas Valleys. The entire watershed of the slough and its two tributaries, Moro Cojo and Tembladero Sloughs, is 226 square miles, but the watershed of Elkhorn Slough proper, east of Moss Landing Harbor, is much smaller, only 70 square miles.

Tidal action scours the lower end of Elkhorn Slough, eroding the pickleweed marsh and widening the channel there, building up mudflats in the south arm of the harbor, and producing a sediment plume out to the sea. However, not all of the slough is affected by tides. The upper end of the slough tends to stagnate in summer, and about half of the marshland in the slough is cut off from the tides entirely or partially by dikes and tide gates. The amount of fresh water coming into the slough changes with the seasons. The mean annual rainfall is approximately 18 to 21 inches, but nearly all of the rain comes in winter. Because of this, the winter surface water salinities of Elkhorn Slough fall below that of the ocean but, in general, the salt content remains close to marine (Nybakken, 1977), so that the floor of the slough may be characterized as "a portion of the ocean bottom conveniently located for study" (MacGinitie, 1935).

Elkhorn Slough is one of the most significant remaining examples of salt marsh on the Pacific coastal flyway along the California coast, between San Francisco Bay and Morro Bay, providing important feeding and resting habitat for resident and migratory shorebirds and waterfowl. Two endangered bird species and one endangered amphibian species live for at least part of the year at Elkhorn Slough.

B. Climate and Air Quality

The climate in the vicinity of Elkhorn Slough is greatly influenced by the proximity of the Pacific Ocean and Monterey Bay. Relatively mild, wet winters and cool, dry summers are characteristic of this region. Rainfall is almost totally confined to the winter months, though in spring and summer there is frequent fog along the coast in early morning and late afternoon.

In general, the air quality in and around Elkhorn Slough is good. The Monterey Bay Unified Air Pollution Control District operates air quality monitoring stations, three of which (Salinas, Monterey, and Aptos) are in the regional vicinity of the slough. Oxident violations at the Aptos station and particulate violations at the Salinas station have been seen in recent years.

#### C. Water Quality

Water quality in Elkhorn Slough has suffered somewhat from development in the watershed. Several mariculture operations exist in the lower part of the slough, but oysters raised by these operations are depurated before being sold, due to a high coliform bacteria count in the area. The primary sources of this coliform are agricultural runoff, septic tank leachate, illegal direct discharges of untreated vessel sewage into the harbor, and sewage plant effluent (largely from Castroville) received by Tembladero Slough and the Old Salinas River channel. Discharge of domestic sewage, treated or untreated, into restricted areas of the Monterey Bay waters is prohibited by Regional Water Quality Control Board policy, but local governments in the area have not yet complied with this policy. Moss Landing, Castroville, and several other towns in the area are considering the possibility of a regional sewage treatment plant with ocean outfalls combined with wastewater reclamation.

The Pacific Gas and Electric (PG&E) power plant has thermal discharge into Elkhorn Slough that raises water temperatures 6 degrees F. on the average near the outfall in the slough. This Moss Landing power plant, at present, discharges an average of 713 acre-feet of heated water (9° F. above ambient) into the lower slough per day. PG&E has recently submitted to the State Water Resources Control Board a report investigating the biological effects of this discharge.

#### D. Habitat Areas

The portion of the slough east of Moss Landing harbor may be divided into the following habitat zones (Bauer & Speth, 1974):

<u>Habitat Zone</u>	<u>Acreage</u>
Marine	300
Littoral	1430
Mudflat	420 acres
Salt marsh	1010 acres
Salt ponds	ca. 300
Maritime and upland	no data

## E. Vegetation

The marine zone vegetation is dominated by algae, particularly Enteromorpha. Some eelgrass remains in the old Salinas River Channel, but the extensive beds that once existed in the lower part of the slough disappeared after the harbor entrance was developed. The slough's salt marsh, one of the largest south of San Francisco Bay, is dominated by perennial Salicornia (pickleweed), which accounts for more than 90 percent of the marsh's cover. The uncultivated uplands surrounding the slough are occupied by oak-grassland and some chaparral.

## F. Wildlife

The primary wildlife group using Elkhorn Slough is migrant water-associated birds, particularly shorebirds. The bird population at Elkhorn has two peaks each year: one in late summer or fall and one in spring. Many migrant species spend six to nine months per year in the slough. The peak shorebird population is 17,000. A total of 138 bird species has been reported for the slough, with more than 90 water-associated species. Three of these are on the California endangered species list: the California clapper rail, the California least tern, and the brown pelican. Populations of up to 2,000 pelicans have been counted on the salt ponds and in the slough.

## G. Marine Resources

Early studies on Elkhorn Slough (e.g. MacGinitie, 1935) described a rich bottom fauna on the mud- and sand-flats near its mouth, but this area has been extensively altered since the harbor mouth was dredged in the 1940s, and recent studies by Moss Landing Marine Laboratories (Nybakken et al., 1977) indicate some changes in the invertebrate fauna there. The exact number of benthic invertebrate and fish species that now use the proposed sanctuary (east of the harbor) is open to question, since most studies cite historic totals for the slough and harbor together. These historic totals are impressive: 371 species of benthic invertebrates (excluding oligochaetes) and 81 species of fish (Nybakken, 1977).

In 1972, the Department of Fish and Game (Browning et al., 1972) reported that 48 species of fish had been collected in the slough, which serves as a nursery and feeding ground for Pacific herring, starry flounder, several species of sharks, and many other fish.

## H. Land and Resource Uses

### 1. Agricultural

The slough is set among rolling hills that steepen to the east and slope gently up to the Salinas River valley in the southeast. Nearly half of the former tidal marshlands have been modified by diking,

primarily for livestock grazing. Grazed grasslands and irrigated pastures occupy lands bordering the slough, primarily on the Rubis Ranch on the north and west, and the old Elkhorn Ranch on the east bank and on the southeast corner. In both locations, fingers of grazed grassland are intertwined with diked pasture or tidal marsh.

The oak woodland and grassland watershed of the hills east of the slough are used for livestock grazing and contain many clearings that are intensively cultivated for strawberry crops. Low density residential development is scattered throughout the foothills east of Elkhorn Road. Residential development is expanding on the north and east of the slough from the communities of Prunedale, Pajaro, and Las Lomas.

Lands north, west, and south of the slough support crops such as artichokes, brussels sprouts, cabbage, beans, lettuce, melons, sugar beets, and strawberries.

## 2. Industrial and Commercial

Moss Landing Harbor, at the mouth of Elkhorn Slough, is the focus for major commercial and industrial enterprises. The northern and southern harbors include marine-oriented commercial development, a yacht club and docking facilities, as well as the Moss Landing Marine Laboratories and the community of Moss Landing. The Pacific Gas and Electric power plant and the Kaiser refractory plant visually dominate the south harbor. The following industries are involved in mariculture at the site: Pacific Mariculture, Inc.; Pigeon Point Shellfish Hatchery; American Shellfish Corp.; and International Shellfish Enterprises.

Within the actual slough, east of these installations, very little land is in commercial or industrial use. Monterey Bay Salt Company owns approximately 300 acres of salt ponds adjacent to Highway 1, though salt is no longer being produced in these ponds.

## 3. Research and Educational

Elkhorn Slough is used extensively for research and educational purposes at all academic levels, from grade school to post doctoral. The California Department of Fish and Game has estimated that in 1972, 2,700 students used the Slough for a total of 6,000 person days. Usage has increased substantially since then.

The Moss Landing Marine Laboratory (MLML) has a faculty of 8-10 scientists and 100-120 students. MLML has estimated that in the 1977-78 academic year there were 1,000 trips per year for organized classwork, and 1,200 trips per year for individual work.

Other major users of Elkhorn Slough are listed below.



<u>Organization</u>	<u>Purpose</u>
Hopkins Marine Station	For marine biology class (25 students) to study the estuarine habitat.
University of California Santa Cruz	(1) For Coastal Marine Studies program (400 student trips/year). (2) For Environmental Studies program (200 student trips/year). This program also brings 30 elementary school groups (900-1,000 children) to the slough.
Cabrillo College	500 students trips/year to study field biology, zoology, etc.
Hartnell College	200 student trips/year for marine biology and nature study
Watsonville High School	500 student trips/year for plant and animal identification, zoology, etc.
Monterey High School	200 Student trips/year for classes in Oceanography and Marine Sciences.
Special Interest Groups	200 + people/year for bird watching, etc.
Monterey Peninsula College	Field trips for field biology, zoology, etc.

The bulk of research prior to 1970 reflected the presence of the academic marine laboratories in the area (e.g. Moss Landing Marine Laboratories, which operated as a sardine cannery in the 1940's and was established as a research and educational institution in 1966, and Hopkins Marine Laboratory at Pacific Grove). As environmental concerns became more pronounced in the late 1960's and early 1970's, and regulatory agencies and environmental legislation established new programs and controls, research activity both offshore and within the slough began to take on a more specific charge: that is, to consider the impact of human disturbance by providing baseline information and monitoring change over time. These recent investigations show increasingly broad scope and program-level design, covering interrelated factors in the slough ecosystem -- marine, estuarine, and terrestrial -- and representing a variety of disciplines. Several of these recent research programs are:

- o Aspects of the life history of Tressus nattalla. 1975 (three-year study).
- o Ecologic and hydrographic studies of Elkhorn Slough, Moss Landing Harbor, and nearshore coastal waters.

- o A preliminary report on a baseline study of Elkhorn Slough, 1977.
- o Wetlands management in Coastal Zone Planning. A two-year Sea Grant research project.

The general fields of research within Elkhorn Slough are marine biology and geology, and physical, biological, and chemical oceanography. Research in marine biology in the slough has included ecosystem analysis, primary productivity analysis, and the study of various facets of faunal biology and natural history, including feeding habit analysis, succession and zonation, and physiological ecology. Marine geological research within the slough has centered on the interrelationship between sediment and organisms, e.g. on organisms as indicators of paleoenvironmental conditions and patterns of deposition. Chemical oceanographic research, which has used specialized sampling gear, has included study of the distribution of trace elements in seawater. While the larger part of research activity has taken place in Monterey Bay, Elkhorn Slough has been the focus of more recent comprehensive investigations. Student theses, under the supervision of faculty, also have contributed to the body of data regarding the slough. (For monitoring activities suggested for Elkhorn Slough by the Moss Landing Marine Laboratories, see Appendix 6.)

#### 4. Fishing

Commercial fishing out of Moss Landing is an important industry. Salmon, albacore, anchovies, rockfish, jack mackerel, Pacific herring, Petrale sole, English sole, sanddabs, sablefish, and squid are the principal species taken in the offshore waters.

Department of Fish and Game surveys prior to 1972 estimate over 26,000 angling days annually in Elkhorn Slough, in Moss Landing Harbor, and off the piers and jetties on the ocean side of the harbor. Small boats can be taken from the harbor up into the slough at low tides, and a public boat launch is available at Kirby Park, where people also fish from the banks. Fish that are commonly caught include the rubberlip sea-perch, pile perch, black perch, jacksmelt, sand sole, staghorn sculpin, starry flounder, walleye perch, cabezon, bat ray, leopard shark, and round stingray.

Introduced gaper, Washington, littleneck, and soft-shelled clams, native oysters, and piddocks are taken from the mud flats of the slough and harbor by private individuals and commercial ventures. Clam digging continues to be very popular, despite the signs posted by the Monterey County Health Department since 1969 warning of shellfish contamination by fecal coliform.

## 5. Mariculture

A small fish farm, the Garrapata Fisheries, conducted a pilot operation in a set of ponds constructed near the Vierra property on the south side of the slough. An application to the California Coastal Commission to continue and expand this preliminary operation was withdrawn and the future of the fish farm is uncertain at this time.

The Monterey Salt Company leases a few of the diked salt ponds adjacent to Highway 1 for raising brine shrimp. Also, both International Shellfish and Pacific Mariculture lease access from the Moss Landing Harbor District to their oyster culture racks. Because fecal coliform counts in the slough are above acceptable health standards, oysters are removed from the slough and transferred to the cleaner waters of Tomales Bay for depuration approximately one month prior to market harvest.

Mariculture, as viewed by NOAA/OCZM and the California Department of Fish and Game, is considered to be a positive and compatible utilization of Elkhorn Slough and the proposed sanctuary. There will be no requirements to undergo a change as a consequence of the establishment of an estuarine sanctuary.

## 6. Miscellaneous

Members of a few private hunting clubs shoot waterfowl in the slough and deer in the nearby uplands. Public access is usually by boat from Kirby Park, though hunting has been declining since 1970, when approximately 160 hunters visited the slough. Some recreational boating goes on in the slough, from the harbor and from the Kirby Park boat launching area at the slough's upper end. In addition, several conservation and outdoor recreation clubs use the slough for hiking and nature study.

## PART V: LIST OF PREPARERS

Mr. James W. MacFarland - U.S. Department of Commerce

Mr. MacFarland received his B.A. and M.A. in Economics and has previously prepared land acquisition strategies, purchased land, acted as a consultant, and analyzed the socioeconomic impacts of land preservation for major land conservation organizations. He is the author of several articles and studies on natural resource protection and is a former college lecturer in economics.

Currently, he is the Estuarine Sanctuary Program Coordinator for the Office of Coastal Zone Management within the National Oceanic and Atmospheric Administration. His present position includes direct project responsibility for five existing estuarine sanctuaries, and the establishment of future estuarine sanctuaries.

Primary responsibility in the preparation of this FEIS included overall direction, organization, and preparation of the report for publication. He also prepared the Alternatives and Environmental Consequences sections.

Mr. Richard Weinstein - U.S. Department of Commerce

Mr. Weinstein is a writer/editor for OCZM/NOAA. He has a B.S. in Zoology, and, at the present time, he is completing the requirements for an M.A. in English by writing a novel that will serve as his Master's Thesis. He is a published author of fiction and has written and edited several major studies prepared by OCZM.

Mr. Weinstein prepared the Affected Environment section, and edited this FEIS.

Ms. Carroll Curtis - U.S. Department of Commerce

Ms. Curtis is a National Sea Grant Intern on assignment to the Sanctuary Programs Office, OCZM/NOAA. She has a B.A. in Biology, and, at the present time, is completing requirements for a M.S. in biology, with concentration in marine and coastal ecology.

Ms. Curtis organized the DEIS Comment and Response Section.

Major Contributors

There are several State of California individuals who were intimately involved in the preparation of this FEIS. Their contributions ranged from outlining consultant work schedules, holding meetings with various interest groups, and reviewing the FEIS document. These individuals are:

Mr. Bruce M. Browning - Wildlife Biologist, California Department of Fish and Game.

Mr. Bruce Elliot - Wildlife Biologist, California Department of Fish and Game.

Mr. Les Strnad - Coastal Planner, Central Coast Regional Coastal Commission.

Mr. Chester M. Hart - Executive Officer, Wildlife Conservation Board.

There were two consulting firms that together produced "Preacquisition Planning Study: Elkhorn Slough." Madrone Associates is an environmental consulting firm that specializes in resource assessment, planning, research, and education. Among other projects this organization has prepared are three environmental assessments within the Elkhorn Slough watershed. Jones and Stokes is an environmental consulting firm that specializes in the biological sciences and resource planning. The firm has had extensive experience in Monterey and Santa Cruz Counties and prepared the Moss Landing Facilities Plan.

## PART VI: LIST OF AGENCIES, ORGANIZATIONS AND PERSONS RECEIVING COPIES

Federal Agencies

Advisory Council on Historic Preservation  
 Department of Agriculture  
 Department of Commerce  
 Department of Defense  
 Department of Energy  
 Department of Health, Education and Welfare  
 Department of Housing and Urban Development  
 Department of the Interior  
 Department of Justice  
 Department of Labor  
 Department of Transportation  
 Environmental Protection Agency  
 Federal Energy Regulatory Commission  
 General Services Administration  
 Marine Mammal Commission  
 Nuclear Regulatory Commission  
 U.S. Army Corps of Engineers  
 U.S. Coast Guard

State and Local Government

California Coastal Council  
 San Jose State University  
 California State University, Fresno  
 University of California, San Diego  
 San Francisco State University  
 Hartnell College  
 Monterey Peninsula College  
 Santa Catalina School  
 Moss Landing Harbor Commission  
 California Coastal Commission  
 California Department of Transportation  
 County of Santa Cruz  
 Santa Cruz County Farm Bureau  
 Monterey County Planning Department  
 Monterey County Farm Bureau  
 Association of Monterey Bay Area Governments (AMBAG)  
 Central Coast Regional Commission  
 Moss Landing Harbor District  
 Monterey Bay Salt Company  
 Monterey Regional County Sanitation District

Interested Groups

King City Chamber of Commerce  
 Moss Landing Chamber of Commerce  
 Salinas Chamber of Commerce  
 Watsonville Chamber of Commerce  
 Butch Escobar Cement Contractor Company  
 Kirby Ranch Association  
 Pacific Gas and Electric Company  
 Moss Landing Marine Laboratories  
 Fish and Game Advisory Commission, Santa Cruz  
 Moss Landing Commercial Fishermen Association  
 Greenpeace (Monterey Office)  
 Sierra Club  
 Monterey Taxpayers' Association  
 The Forest Committee  
 The Nature Conservancy  
 Santa Cruz Bird Club  
 International Shellfish  
 Elkhorn Sea Farms  
 Save Our Shores  
 Hopkins Marine Station  
 Kaiser Refractories  
 Northern California Coastal Trust  
 California Native Plant Society  
 Animal Protection Institute of America  
 Golden Gate Audubon Society  
 The Resources Agency of California  
 Monterey Peninsula Audubon Society  
 League of Women Voters of the Monterey Peninsula  
 Santa Clara Valley Audubon Society, Inc.  
 Friends of the Sea  
 Natural Resources Defense Council, Inc.  
 Friends of the Sea Otter  
 Monterey Bay Aquarium Foundation  
 Pacific Grove Museum of Natural History  
 Monterey County Foundation of Concern, Inc.  
 The Nature Conservancy and Point Reyes Bird Sanctuary

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 Peter Trundle  
 William Bradley  
 Bob Ramer  
 Leonard Goulart  
 Donald J. Whiteman  
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 Judy E. Suggs  
 Ellen B. Gammack  
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 Jean Bleick  
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 L.C. Blankenbecker, Sr.  
 Mrs. J. Chandler  
 Stephanie Singer  
 Ronald & Genevieve Smith  
 Tiny DeRay  
 Dean Baird  
 Mr. & Mrs. David Metz  
 Philip S. Broughton  
 Douglas & Janet Despard  
 Frances & Jefferson Lackey  
 David W. Vollmer  
 Russell E. Shea  
 Mrs. James Moody  
 Mrs. Beverly Shea  
 Earl L. & Lois L. Moser  
 Robert Jazwin  
 Mrs. William Arnberg  
 Ray & Catherine Burgess  
 C.H. Francis

Donald Phipps  
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 Bob Harris  
 Walter L. Schroeder  
 Garth Conlan  
 Robert Deson  
 Vern Yadon  
 Dr. Marilyn Vassalo  
 Jud Vandever  
 Henry Case  
 Betty Landress  
 Bill Doyle  
 Dan Hudson  
 Estelle Blohm  
 C. "Sam" Samples  
 Harry Hicks  
 Greg Winter  
 Marion E. Chilson  
 Leta Marie Bakke-Delungio  
 Margaret Moody  
 William Brodsley  
 Gary S. Bloom  
 Doris K. Horn  
 Robert Epperson  
 Sylvia Knaption  
 Nada Kovalik  
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 James & Cynthia Waddington  
 Dr. & Mrs. Arthur E. Benoit  
 Dorothy Gaylord  
 Mr. & Mrs. Alexander Weygers  
 Mrs. C. Bonestall  
 Kay & Carl Larson  
 Emmett Garman  
 Jesus Hernandez  
 Charlie Hagan  
 James T. Dew  
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Van Chambers  
Jane Jewett

## PART VII: APPENDICES

- I. Estuarine Sanctuary Guidelines, 15 CFR 921, p. 1922-19927, June 4, 1974 and amendment 15 CFR 921, p. 45522-45523, September 9, 1977.
- II. California Statute 1968, Chapter 1257, Ecological Reserves.
- III. Birds, Fish, Plants, Animals, and Shellfish of Elkhorn Slough.
- IV. Principal Agencies and Organizations.
- V. Suggested Monitoring for Elkhorn Slough.
- VI. Comparison of Marine and Estuarine Sanctuary Programs.
- VII. References.
- VIII. LCP work tasks: North County Segment.
- IX. Individual Parcel Ownerships.
- X. Summarized Comments on the DEIS and Responses by OCZM to these Comments

APPENDIX I

TUESDAY, JUNE 4, 1974

WASHINGTON, D.C.

Volume 39 ■ Number 108

PART IV



# DEPARTMENT OF COMMERCE

National Oceanic and  
Atmospheric Administration



Estuarine Sanctuary Guidelines



Title 15—Commerce and Foreign Trade  
**CHAPTER IX—NATIONAL OCEANIC AND  
 ATMOSPHERIC ADMINISTRATION, DE-  
 PARTMENT OF COMMERCE**

**PART 921—ESTUARINE SANCTUARY  
 GUIDELINES**

The National Oceanic and Atmospheric Administration (NOAA) on March 7, 1974, proposed guidelines (15 CFR Part 921) pursuant to section 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280), hereinafter referred to as the "Act," for the purpose of establishing the policy and procedures for the nomination, selection and management of estuarine sanctuaries.

Written comments were to be submitted to the Office of Coastal Environment (now the Office of Coastal Zone Management), National Oceanic and Atmospheric Administration, before April 8, 1974, and consideration has been given those comments.

The Act recognizes that the coastal zone is rich in a variety of natural, commercial, recreational, industrial and esthetic resources of immediate and potential value to the present and future well-being of the nation. States are encouraged to develop and implement management programs to achieve wise use of the resources of the coastal zone, and the Act authorizes Federal grants to the States for these purposes (sections 305 and 306).

In addition, under section 312 of the Act, the Secretary of Commerce is authorized to make available to a coastal State grants of up to 50 per centum of the cost of acquisition, development and operation of estuarine sanctuaries. The guidelines contained in this part are for grants under section 312.

In general, section 312 provides that grants may be awarded to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of this program.

The National Oceanic and Atmospheric Administration is publishing herewith the final regulations describing the procedures for applications to receive grants for estuarine sanctuaries under section 312 of the Act. The final regulations and criteria were revised from the proposed guidelines based on the comments received. A total of fifty (50) States, agencies, organizations and individuals submitted responses to the proposed section 312 guidelines published in the FEDERAL REGISTER on March 7, 1974. Of those responses received, eight (8) offered no comment or were wholly favorable as to the nature and content of the guidelines as originally proposed. Forty-two (42) commentators submitted suggestions concerning the proposed section 312 guidelines.

The following summary analyzes key comments received on various sections of

the proposed regulations and presents the rationale for the responses made.

**Section 921.2 Definitions.** Three comments requested that the term "estuary" be defined. Although the term is defined in the Act and also in the regulations dealing with Coastal Zone Management Program Development Grants (Part 920 of this chapter) published November 29, 1973, it has been added to these regulations and broadened slightly to include marine lagoons with restricted freshwater input such as might occur along the south Texas coast.

Two other comments requested that the "primary purpose" referred to in § 921.2(b) be clearly defined. Although elaborated upon in § 921.3(a), for the purpose of clarity this change has been made.

**Section 921.3 Objectives and Implementation.** Several comments suggested that the estuarine sanctuary program objectives were too narrowly defined and specifically that they should be broadened to include the acquisition and preservation of unique or endangered estuaries for wildlife or ecological reasons. Although the Act (section 302) declares it the nation's policy to preserve, protect, develop, and where possible, to restore or enhance coastal resources, this is perceived to be achievable through State actions pursuant to sections 305 and 306. While it is recognized that the creation of an estuarine sanctuary may in fact serve to preserve or protect an area or biological community, the legislative history of section 312 clearly indicates the estuarine sanctuary program was not intended to duplicate existing broad purpose Federal preservation programs, such as might be accommodated by use of the Land and Water Conservation Fund Act. Instead, both in the Act as well as its legislative history, the objective is defined as preserving representative estuarine areas for long-term research and educational uses.

Three other comments suggested the objectives of the program should be enlarged to include the restoration of environmentally degraded areas. This, too, is perceived to be a State requirement separate from section 312. In addition, adequate authority for restoring degraded water areas now exists (for example, Pub. L. 92-500 in addition to sections 302, 305 and 306 of the Act). No significant additional benefit would appear to result from declaring an area an estuarine sanctuary for the purposes of restoration.

A few comments indicated that the examples of sanctuary use were too heavily weighted toward scientific uses to the exclusion of educational uses. Public education concerning the value and benefits of, and the nature of conflict within the coastal zone, will be essential to the success of a coastal zone management program. The section has been changed to reflect an appropriate concern for educational use.

Some commentators suggested changes in or additions to the specific examples of sanctuary uses and purposes. These examples were taken from the Senate

and House Committee Reports and are considered sufficient to reflect the kinds of uses intended within an estuarine sanctuary.

Several comments were received pertaining to § 921.3(c) involving the restrictions against overemphasis of destructive or manipulative research. Ten comments indicated that the section was too weak and would not provide sufficient long-term protection for the sanctuary ecosystem. Several commentators specifically recommended deleting the words "would not normally be permitted" and inserting in their place "will not be permitted." In contrast, three respondents indicated that the potential use of estuarine sanctuaries for manipulative or destructive research was too restricted, and that these uses should be generally permitted if not encouraged.

The legislative history of section 312 clearly indicates that the intent of the estuarine sanctuary program should be to preserve representative estuarine areas so that they may provide long-term (virtually permanent) scientific and educational use. The uses perceived are compatible with what has been defined as "research natural areas." In an era of rapidly degrading estuarine environments, the estuarine sanctuary program will ensure that a representative series of natural areas will be available for scientific or educational uses dependent on that natural character, for example, for baseline studies, for use in understanding the functioning of natural ecological systems, for controls against which the impacts of development in other areas might be compared, and as interpretive centers for educational purposes. Any use, research or otherwise, which would destroy or detract from the natural system, would be inappropriate under this program.

In general, the necessity of or benefit from permitting manipulative or destructive research within an estuarine sanctuary is unclear. While there is a legitimate need for such kinds of research, ample opportunity for manipulative or destructive research to assess directly man's impact or stresses on the estuarine environment exists now without the need for creation or use of an estuarine sanctuary for this purpose. In contrast, a clear need exists for natural areas to serve as controls for manipulative research or research on altered systems.

The section on manipulative research has been changed to reflect the concern for continued maintenance of the area as a natural system. However, the modifier "normally" has been retained because, within these limits, it is not felt necessary to preclude all such uses; the occasion may rarely arise when because of a thoroughly demonstrated direct benefit, such research may be permitted.

Several comments suggested that the program should include degraded estuarine systems, rather than be limited to areas which are "relatively undisturbed by human activities." Such areas would permit research efforts designed to restore an estuarine area. As indicated

above, an ample legislative mandate to restore environmentally degraded areas already exists; the benefits to be derived from declaring such areas estuarine sanctuaries would be marginal. Indeed, it would appear that if restoration efforts cannot occur without estuarine sanctuary designation, then, given the limited resources of this program, such efforts would not be feasible.

A few commentators suggested that the phrase (§ 921.3(e)) "if sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest" be more clearly defined. Explanatory language has been added to that section.

Section 921.4 *Zoogeographic Classification*. Because the classification scheme utilized plants as well as animals, two commentators suggested that zoogeographic be changed to biogeographic. This change is reflected in the final regulations.

One comment suggested that selection of sanctuaries should depend on the pressures and threats being brought to bear upon the natural areas involved even if this meant selecting several sanctuaries from one classification and none from another.

The legislative history of section 312 clearly shows the intent to select estuarine sanctuaries on a rational basis which would reflect regional differentiation and a variety of ecosystems. The biogeographic classification system, which reflects geographic, hydrographic, and biologic differences, fulfills that intention. A scheme which would abandon that system, or another similar one, and would not fulfill the requirements of providing regional differentiation and a variety of ecosystems, would not be consistent with the intended purpose of the Act.

A few comments received suggested that the biogeographic classification scheme be enlarged by the addition of a new class reflecting an area or State of special concern or interest to the respondent. (No two commentators suggested the same area.) It is felt that adequate national representation is provided by the biogeographic scheme proposed, and that the changes offered were in most cases examples of sub-categories that might be utilized.

One comment suggested a specific change in the definition of the "Great Lakes" category. Portions of that suggestion have been incorporated into the final rules.

Two commentators requested assurance that sub-categories of the biogeographic scheme will in fact be utilized. The final language substitutes "will be developed and utilized" for "may be developed and utilized."

Section 921.5 *Multiple Use*. Several comments were received pertaining to the multiple use concept. Three commentators suggested that the multiple use directive was contrary to or absent from the Act and should be omitted. Ten respondents felt the concept should be more explicitly defined and restricted so

that the primary purpose of the sanctuary would be more clearly protected. In contrast, two commentators felt that the definition might prove too restrictive and should be broadened. Several commentators suggested that examples of anticipated multiple use might be appropriate.

While recognizing that it is not always possible to accommodate more than a single use in an environmentally sensitive area, it is not the intention to unnecessarily preclude the uses of sanctuary areas where they are clearly compatible with and do not detract from the long-term protection of the ecosystem for scientific and educational purposes. The language of § 921.5 has been changed accordingly.

Section 921.6 *Relationship to Other Provisions of the Act and to Marine Sanctuaries*. Several comments were received which commended and stressed the need for close coordination between the development of State coastal zone management programs, especially and land and water use controls, and the estuarine sanctuary program.

The relationship between the two programs is emphasized: estuarine sanctuaries should provide benefit—both short-term and long-term—to coastal zone management decision-makers; and State coastal zone management programs must provide necessary protection for estuarine sanctuaries. This necessary coordination is discussed not only in the estuarine sanctuary regulations, but will also be addressed in an appropriate fashion in guidelines and rules for Coastal Zone Management Program Approval Criteria and Administrative Grants.

Three commentators discussed the need for swift action by both State and Federal governments to establish and acquire estuarine sanctuaries. The Office of Coastal Zone Management intends to pursue the program as swiftly as available manpower restraints will permit.

A few comments sought reassurance that the estuarine sanctuaries program will in fact be coordinated with the Marine Sanctuaries Program (Title III, Pub. L. 92-532). The guidelines have been changed to reflect that both programs will be administered by the same office.

#### SUBPART B—APPLICATION FOR GRANTS

Section 921.10 *General*. One reviewer indicated uncertainty about which State agency may submit applications for grants under section 312. Although individual States may vary in the choice of individual agencies to apply for an estuarine sanctuary, because of the necessity for coordination with the State coastal zone management program the entity within the State which is the certified contact with the Office of Coastal Zone Management, NOAA, responsible for the administration of the coastal zone management program must endorse or approve an estuarine sanctuary application.

Appropriate language has been included to ensure this coordination.

Section 921.11 *Initial Application for Acquisition, Development and Operation*

*Grants*. Two comments requested that the source and nature of acceptable matching funds should be explicitly identified.

OMB Circular A-102 generally defines and identifies legitimate "match" for Federal grant projects. In general, reference should be made to that document. However, the section has been expanded in response to some specific and frequent questions.

Two comments stressed the need for increased availability of research funds to adequately utilize the potential of estuarine sanctuaries. While not an appropriate function of the estuarine sanctuary program, the Office of Coastal Zone Management is discussing the necessity of adequate funding with appropriate agencies.

One comment suggested that the term "legal description" of the sanctuary (§ 921.11(a)) is not appropriate for all categories of information requested. The word "legal" has been omitted.

Three reviewers indicated that the Act provides no basis for consideration of socio-economic impacts (§ 921.11(i)) and that this criterion seemed inappropriate to selecting estuarine sanctuaries. Apparently these reviewers misunderstood the intention of this requirement. The information in this section is necessary for preparation of an environmental impact statement which will be prepared pursuant to NEPA. Although required in the application, such information is not a part of the selection criteria, which are addressed in Subpart C, § 921.20.

One similar comment was received with regard to consideration of existing and potential uses and conflicts (§ 921.11(h)). This item is also discussed under selection criteria (§ 921.20(h)). It is intended that this criterion will only be considered when choosing between two or more sanctuary applications within the same biogeographic category which are of otherwise equal merit.

One comment drew attention to an apparent typographic error in § 921.11 (m) where the term "marine estuaries" seems out of context. This has been corrected.

Two commentators suggested that public hearings should be required in the development of an estuarine sanctuary application. Although such a hearing is deemed desirable by the Office of Coastal Zone Management, it would not always seem to be necessary. The language in § 920.11(1) has been changed to reflect the sincere concern for the adequate involvement of the public, which is also addressed under a new § 920.21.

One respondent suggested that a new section be added requiring the applicant to discuss alternative methods of acquisition or control of the area, including the designation of a marine sanctuary, in place of establishing an estuarine sanctuary. A new section (§ 920.11(n)) has been added for this purpose.

Section 921.12 *Subsequent Application for Development and Operation Grants*. Three commentators expressed concern that the intent of § 921.12 be more clearly expressed. Appropriate changes have been made.

One comment was made that a provision should be included to use existing Federally owned land for the purpose of the estuarine sanctuary program. A section has been added for that purpose.

Section 921.20 *Criteria for Selection*. One comment suggested that the consideration of conflict with existing or potential competing uses should not be included as a selection criterion. As discussed above, this criterion is considered appropriate.

Another reviewer suggested the addition of a new criterion, consideration of "the need to protect a particular estuary from harmful development." As discussed earlier, this criterion is not considered appropriate. Such a basis for determining selection would lead to a reactionary, random series of estuarine sanctuaries, rather than the rationally chosen representative series mandated in the legislative history.

Two reviewers commented that the limitation on the Federal share (\$2,000,000 for each sanctuary) was too low and would severely restrict the usefulness of the program. However, this limitation is provided by the Act.

Another commentator suggested that § 921.20(g) was unnecessarily restrictive in that it might prevent selecting an estuarine sanctuary in an area adjacent to existing preserved lands where the conjunction might be mutually beneficial. The language of § 921.20(g) does not preclude such action, but has been changed to specifically permit this possibility.

Two commentators inquired whether the reference to a "draft" environmental impact statement (§ 921.20, last paragraph) indicated an intention to avoid further compliance with NEPA. It is the firm intention of the Office of Coastal Zone Management to fully comply in all respects with NEPA. The word "draft" has been struck.

Three reviewers addressed the problems of providing adequate public participation in the review and selection process. In addition to the change in § 920.11(1), a new section has been added to address this issue.

#### SUBPART D—OPERATION

Section 921.30 *General*. One commentator suggested that during contract negotiations, there should be a meeting between the applicant agency and proposed sanctuary management team, and representatives of the Office of Coastal Zone Management. The general provisions have been broadened to provide for this suggestion.

Two comments were submitted which urged that some discretion be exercised in the use and access to the sanctuary by scientists and students. Two other comments were received which requested specific protection for use by the general public. The guidelines have been changed to include these suggestions.

One comment was received suggesting language to clarify § 921.30(g). This was incorporated into the guidelines.

Two commentators expressed concern for enforcement capabilities and activities to ensure protection of the estuarine sanctuaries. A new section has been added which addresses this issue.

Finally, one suggestion was received that a vehicle for change in the management policy or research programs should be provided. A new section has been added for that purpose.

Accordingly, having considered the comments received and other relevant information, the Secretary concludes by adopting the final regulations describing the procedure for applications to receive estuarine sanctuary grants under section 312 of the Act, as modified and set forth below.

Effective date: June 3, 1974.

Dated: May 31, 1974.

ROBERT M. WHITE,  
Administrator.

#### Subpart A—General

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|-------|--|
| Sec.  |  |
| 921.1 | Policy and objectives.   |
| 921.2 | Definitions.   |
| 921.3 | Objectives and implementation of the program.                          |
| 921.4 | Biogeographic classification.  |
| 921.5 | Multiple use.  |
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#### Subpart B—Application for Grants

- |        |  |
|--------|--|
| 921.10 | General.   |
| 921.11 | Application for initial acquisition, development and operation grants. |
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| 921.13 | Federally owned lands.   |

#### Subpart C—Selection Criteria

- |        |                         |
|--------|-------------------------|
| 921.20 | Criteria for selection. |
| 921.21 | Public participation.   |

#### Subpart D—Operation

- |        |   |
|--------|---|
| 921.30 | General.  |
| 921.31 | Changes in the sanctuary boundary, management policy or research program. |
| 921.32 | Program review.   |

AUTHORITY: Sec. 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280).

#### Subpart A—General

##### § 921.1 Policy and Objectives.

The estuarine sanctuaries program will provide grants to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time the ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of the program.

##### § 921.2 Definitions.

(a) In addition to the definitions found in the Act and in the regulations dealing with Coastal Zone Management Program Development Grants published November 29, 1973 (Part 920 of this chapter) the term "estuarine sanctuary" as defined in the Act, means a research area which may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting

to the extent feasible a natural unit, set aside to provide scientists and students the opportunity to examine over a period of time the ecological relationships within the area.

(b) For the purposes of this section, "estuary" means that part of a river or stream or other body of water having unimpaired connection with the open sea where the seawater is measurably diluted with freshwater derived from land drainage. The term includes estuary-type areas of the Great Lakes as well as lagoons in more arid coastal regions.

(c) The term "multiple use" as used in this section shall mean the simultaneous utilization of an area or resource for a variety of compatible purposes or to provide more than one benefit. The term implies the long-term, continued uses of such resources in such a fashion that other uses will not interfere with, diminish or prevent the primary purpose, which is the long-term protection of the area for scientific and educational use.

##### § 921.3 Objectives and implementation of the program.

(a) General. The purpose of the estuarine sanctuaries program is to create natural field laboratories in which to gather data and make studies of the natural and human processes occurring within the estuaries of the coastal zone. This shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each type of estuarine ecosystem will endure into the future for scientific and educational purposes. The primary use of estuarine sanctuaries shall be for research and educational purposes, especially to provide some of the information essential to coastal zone management decision-making. Specific examples of such purposes and uses include but are not limited to:

(1) To gain a thorough understanding of the ecological relationships within the estuarine environment.

(2) To make baseline ecological measurements.

(3) To monitor significant or vital changes in the estuarine environment.

(4) To assess the effects of man's stresses on the ecosystem and to forecast and mitigate possible deterioration from human activities.

(5) To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems which confront them.

(b) The emphasis within the program will be on the designation as estuarine sanctuaries of areas which will serve as natural field laboratories for studies and investigations over an extended period. The area chosen as an estuarine sanctuary shall, to the extent feasible, include water and land masses constituting a natural ecological unit.

(c) In order that the estuarine sanctuary will be available for future studies, research involving the destruction of any portion of an estuarine sanctuary which would permanently alter the nature of the ecosystem shall not normally be

permitted. In the unusual circumstances where permitted, manipulative field research shall be carefully controlled. No experiment which involves manipulative research shall be initiated until the termination date is specified and evidence given that the environment will be returned to its condition which existed prior to the experiment.

(d) It is anticipated that most of the areas selected as sanctuaries will be relatively undisturbed by human activities at the time of acquisition. Therefore, most of the areas selected will be areas with a minimum of development, industry or habitation.

(e) If sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest. Such interest may be, for example, the acquisition of a conservation easement, "development rights", or other partial interest sufficient to assure the protection of the natural system. Leasing, which would not assure permanent protection of the system, would not be an acceptable alternative.

#### § 921.4 Biogeographic classification.

(a) It is intended that estuarine sanctuaries should not be chosen at random, but should reflect regional differentiation and a variety of ecosystems so as to cover all significant variations. To ensure adequate representation of all estuarine types reflecting regional differentiation and a variety of ecosystems, selections will be made by the Secretary from the following biogeographic classifications:

1. *Arcadian*. Northeast Atlantic coast south to Cape Cod; glaciated shoreline subject to winter icing; well developed algal flora; boreal biota.

2. *Virginian*. Middle Atlantic coast from Cape Cod to Cape Hatteras; lowland streams, coastal marshes and muddy bottoms; characteristics transitional between 1 and 3; biota primarily temperate with some boreal representatives.

3. *Carolinian*. South Atlantic coast, from Cape Hatteras to Cape Kennedy; extensive marshes and swamps; waters turbid and productive; biota temperate with seasonal tropical elements.

4. *West Indian*. South Florida coast from Cape Kennedy to Cedar Key; and Caribbean Islands; shoreland low-lying limestone; calcareous sands, marls and coral reefs; coastal marshes and mangroves; tropical biota.

5. *Louisianian*. Northern Gulf of Mexico, from Cedar Key to Mexico; characteristics of 3, with components of 4; strongly influenced by terrigenous factors; biota primarily temperate.

6. *Californian*. South Pacific coast from Mexico to Cape Mendocino; shoreland influenced by coastal mountains; rocky coasts with reduced fresh-water runoff; general absence of marshes and swamps; biota temperate.

7. *Columbian*. North Pacific coast from Cape Mendocino to Canada; mountainous shoreland; rocky coasts; extensive algal communities; biota primarily temperate with some boreal.

8. *Flordis*. South coast Alaska and Aleutians; precipitous mountains; deep estuaries, some with glaciers; shoreline heavily in-

dented and subject to winter icing; biota boreal to sub-Arctic.

9. *Subarctic*. West and north coasts of Alaska; ice stressed coasts; biota Arctic and sub-Arctic.

10. *Insular*. Larger islands, sometimes with precipitous mountains; considerable wave action; frequently with endemic species; larger island groups primarily with tropical biota.

11. *Great Lakes*. Great Lakes of North America; bluff-dune or rocky, glaciated shoreline; limited wetlands; freshwater only; biota a mixture of boreal and temperate species with anadromous species and some marine invaders.

(b) Various sub-categories will be developed and utilized as appropriate.

#### § 921.5 Multiple use.

(a) While the primary purpose of estuarine sanctuaries is to provide long-term protection for natural areas so that they may be used for scientific and educational purposes, multiple use of estuarine sanctuaries will be encouraged to the extent that such use is compatible with this primary sanctuary purpose. The capacity of a given sanctuary to accommodate additional uses, and the kinds and intensity of such use, will be determined on a case by case basis. While it is anticipated that compatible uses may generally include activities such as low intensity recreation, fishing, hunting, and wildlife observation, it is recognized that the exclusive use of an area for scientific or educational purposes may provide the optimum benefit to coastal zone management and resource use and may on occasion be necessary.

(b) There shall be no effort to balance or optimize uses of an estuarine sanctuary on economic or other bases. All additional uses of the sanctuary are clearly secondary to the primary purpose and uses, which are long-term maintenance of the ecosystem for scientific and educational uses. Non-compatible uses, including those uses which would cause significant short or long-term ecological change or would otherwise detract from or restrict the use of the sanctuary as a natural field laboratory, will be prohibited.

#### § 921.6 Relationship to other provisions of the act and to marine sanctuaries.

(a) The estuarine sanctuary program must interact with the overall coastal zone management program in two ways:

(1) the intended research use of the sanctuary should provide relevant data and conclusions of assistance to coastal zone management decision-making, and (2) when developed, the State's coastal zone management program must recognize and be designed to protect the estuarine sanctuary; appropriate land and water use regulations and planning considerations must apply to adjacent lands. Although estuarine sanctuaries should be incorporated into the State coastal zone management program, their designation need not await the development and approval of the management program where operation of the estuarine sanctuary would aid in the development of a program.

(b) The estuarine sanctuaries program will be conducted in close cooperation with the marine sanctuaries program (Title III of the Marine Protection, Research Act of 1972, Pub. L. 92-532, which is also administered by the Office of Coastal Zone Management, NOAA), which recognizes that certain areas of the ocean waters, as far seaward as the outer edge of the Continental Shelf, or other coastal waters where the tide ebbs and flows, or of the Great Lakes and their connecting waters, need to be preserved or restored for their conservation, recreational, ecologic or esthetic values. It is anticipated that the Secretary on occasion may establish marine sanctuaries to complement the designation by States of estuarine sanctuaries, where this may be mutually beneficial.

#### Subpart B—Application for Grants

#### § 921.10 General.

Section 312 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Director, Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Rockville, Maryland 20852. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

#### § 921.11 Application for initial acquisition, development and operation grants.

(a) Grants may be awarded on a matching basis to cover the costs of acquisition, development and operation of estuarine sanctuaries. States may use donations of land or money to satisfy all or part of the matching cost requirements.

(b) In general, lands acquired pursuant to this section, including State owned lands but not State owned submerged lands or bay bottoms, that occur within the proposed sanctuary boundary are legitimate costs and their fair market value may be included as match. However, the value of lands donated to or by the State for inclusion in the sanctuary may only be used to match other costs of land acquisition. In the event that lands already exist in a protected status, their value cannot be used as match for sanctuary development and operation grants, which will require their own matching funds.

(c) Development and operation costs may include the administrative expenses necessary to monitor the sanctuary, to ensure its continued viability and to protect the integrity of the ecosystem. Research will not normally be funded by Section 312 grants. It is anticipated that other sources of Federal, State and

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private funds will be available for research in estuarine sanctuaries.

(d) Initial applications should contain the following information:

(1) Description of the proposed sanctuary include location, boundaries, size and cost of acquisition, operation and development. A map should be included, as well as an aerial photograph, if available.

(2) Classification of the proposed sanctuary according to the biogeographic scheme set forth in § 921.4.

(3) Description of the major physical, geographic and biological characteristics and resources of the proposed sanctuary.

(4) Identification of ownership patterns; proportion of land already in the public domain.

(5) Description of intended research uses, potential research organizations or agencies and benefits to the overall coastal zone management program.

(6) Demonstration of necessary authority to acquire or control and manage the sanctuary.

(7) Description of proposed management techniques, including the management agency, principles and proposed budget including both State and Federal shares.

(8) Description of existing and potential uses of and conflicts within the area if it were not declared an estuarine sanctuary; potential use, use restrictions and conflicts if the sanctuary is established.

(1) Assessment of the environmental and socio-economic impacts of declaring the area an estuarine sanctuary, including the economic impact of such a designation on the surrounding community and its tax base.

(9) Description of planned or anticipated land and water use and controls for contiguous lands surrounding the proposed sanctuary (including if appropriate an analysis of the desirability of creating a marine sanctuary in adjacent areas).

(10) List of protected sites, either within the estuarine sanctuaries program or within other Federal, State or private programs, which are located in the same regional or biogeographic classification.

(1) It is essential that the opportunity be provided for public involvement and input in the development of the sanctuary proposal and application. Where the application is controversial or where controversial issues are addressed, the State should provide adequate means to ensure that all interested parties have the opportunity to present their views. This may be in the form of an adequately advertised public hearing.

(ii) During the development of an estuarine sanctuary application, all landowners within the proposed boundaries should be informed in writing of the proposed grant application.

(iii) The application should indicate the manner in which the State solicited the views of all interested parties prior to the actual submission of the application.

(e) In order to develop a truly representative scheme of estuarine sanctu-

aries, the States should attempt to coordinate their activities. This will help to minimize the possibility of similar estuarine types being proposed for designation in the same region. The application should indicate the extent to which neighboring States were consulted.

(f) Discussion, including cost and feasibility, of alternative methods for acquisition, control and protection of the area to provide similar uses. Use of the Marine Sanctuary authority and funds from the Land and Water Conservation Fund Act should be specifically addressed.

#### § 921.12 Application for subsequent development and operation grants.

(a) Although the initial grant application for creation of an estuarine sanctuary should include initial development and operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional development and operation funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 312 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications for such development and operation grants should include at least the following information:

(1) Identification of the boundary.

(2) Specifications of the management program, including managing agency and techniques.

(3) Detailed budget.

(4) Discussion of recent and projected use of the sanctuary.

(5) Perceived threats to the integrity of the sanctuary.

#### § 921.13 Federally owned lands.

(a) Where Federally owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies. Such lands and State request, and the Federal agency response, should be identified and conveyed to the Office of Coastal Zone Management.

(b) Where such proposed use or control of Federally owned lands would not conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 312 grants may not be awarded to Federal agencies for creation of estuarine sanctuaries in Federally owned lands; however, a similar status may be provided on a voluntary basis for Federally owned lands under the provisions of the Federal Committee on Ecological Preserves program.

#### Subpart C—Selection Criteria

##### § 921.20 Criteria for selection.

Applications for grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:

(a) Benefit to the coastal zone management program. Applications should demonstrate the benefit of the proposal to the development or operations of the overall coastal zone management program, including how well the proposal fits into the national program of representative estuarine types; the national or regional benefits; and the usefulness in research.

(b) The ecological characteristics of the ecosystem, including its biological productivity, diversity and representativeness. Extent of alteration of the natural system, its ability to remain a viable and healthy system in view of the present and possible development of external stresses.

(c) Size and choice of boundaries. To the extent feasible, estuarine sanctuaries should approximate a natural ecological unit. The minimal acceptable size will vary greatly and will depend on the nature of the ecosystem.

(d) Cost. Although the Act limits the Federal share of the cost for each sanctuary to \$2,000,000, it is anticipated that in practice the average grant will be substantially less than this.

(e) Enhancement of non-competitive uses.

(f) Proximity and access to existing research facilities.

(g) Availability of suitable alternative sites already protected which might be capable of providing the same use or benefit. Unnecessary duplication of existing activities under other programs should be avoided. However, estuarine sanctuaries might be established adjacent to existing preserved lands where mutual enhancement or benefit of each might occur.

(h) Conflict with existing or potential competing uses.

(i) Compatibility with existing or proposed land and water use in contiguous areas.

If the initial review demonstrates the feasibility of the application, an environmental impact statement will be prepared by the Office of Coastal Zone Management in accordance with the National Environmental Policy Act of 1969 and implementing CEQ guidelines.

##### § 921.21 Public participation.

Public participation will be an essential factor in the selection of estuarine sanctuaries. In addition to the participation during the application development process (§ 921.11(e)), public participation will be ensured at the Federal level by the NEPA process and by public hearings where desirable subsequent to NEPA. Such public hearings shall be held by the Office of Coastal Zone Management in the area to be affected by the proposed sanctuary no sooner than 30 days after it issues a draft environmental impact



statement on the sanctuary proposal. It will be the responsibility of the Office of Coastal Zone Management, with the assistance of the applicant State, to issue adequate public notice of its intention to hold a public hearing. Such public notice shall be distributed widely, especially in the area of the proposed sanctuary; affected property owners and those agencies, organizations or individuals with an identified interest in the area or estuarine sanctuary program shall be notified of the public hearing. The public notice shall contain the name, address and phone number of the appropriate Federal and State officials to contact for additional information about the proposal.

#### Subpart D—Operation

##### § 921.30 General.

Management of estuarine sanctuaries shall be the responsibility of the applicant State or its agent. However, the research uses and management program must be in conformance with these guidelines and regulations, and others implemented by the provisions of individual grants. It is suggested that prior to the grant award, representatives of the proposed sanctuary management team and the Office of Coastal Zone Management meet to discuss management policy and standards. It is anticipated that the grant provisions will vary with individual circumstances and will be mutually agreed to by the applicant and

the granting agency. As a minimum, the grant document for each sanctuary shall:

- (a) Define the intended research purposes of the estuarine sanctuary.
- (b) Define permitted, compatible, restricted and prohibited uses of the sanctuary.
- (c) Include a provision for monitoring the uses of the sanctuary, to ensure compliance with the intended uses.
- (d) Ensure ready access to land use of the sanctuary by scientists, students and the general public as desirable and permissible for coordinated research and education uses, as well as for other compatible purposes.
- (e) Ensure public availability and reasonable distribution of research results for timely use in the development of coastal zone management programs.
- (f) Provide a basis for annual review of the status of the sanctuary, its value to the coastal zone program.
- (g) Specify how the integrity of the system which the sanctuary represents will be maintained.
- (h) Provide adequate authority and intent to enforce management policy and use restrictions.

##### § 921.31 Changes in the sanctuary boundary, management policy or research program.

- (a) The approved sanctuary boundaries; management policy, including permissible and prohibited uses; and re-

search program may only be changed after public notice and the opportunity of public review and participation such as outlined in § 921.21.

(b) Individuals or organizations which are concerned about possible improper use or restriction of use of estuarine sanctuaries may petition the State management agency and the Office of Coastal Zone Management directly for review of the management program.

##### § 921.32 Program review.

It is anticipated that reports will be required from the applicant State on a regular basis, no more frequently than annually, on the status of each estuarine sanctuary. The estuarine sanctuary program will be regularly reviewed to ensure that the objectives of the program are being met and that the program itself is scientifically sound. The key to the success of the estuarine sanctuaries program is to assure that the results of the studies and research conducted in these sanctuaries are available in a timely fashion so that the States can develop and administer land and water use programs for the coastal zone. Accordingly, all information and reports, including annual reports, relating to estuarine sanctuaries shall be part of the public record and available at all times for inspection by the public.

[FR Doc.74-12775 Filed 5-31-74;9:57 am]

**FRIDAY, SEPTEMBER 9, 1977**

## PART IV



DEPARTMENT OF  
COMMERCE

**National Oceanic and  
Atmospheric Administration**



# ESTUARINE SANCTUARY

## Guidelines

## PROPOSED RULES

## DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric  
Administration

[ 15 CFR Part 921 ]

## ESTUARINE SANCTUARY GUIDELINES

Policies and Procedures for Selection  
Acquisition and ManagementAGENCY: National Oceanic and Atmos-  
pheric Administration, Department of  
Commerce.

ACTION: Proposed rule.

**SUMMARY:** This proposed rule will allow the National Oceanic and Atmospheric Administration to make a preliminary acquisition grant to a State to undertake a fair market value appraisal, and to develop a uniform relocation act plan, a detailed management plan and a research framework for a proposed estuarine sanctuary, developed pursuant to Section 315 of the Coastal Zone Management Act of 1972, as amended.

**DATE:** Comments must be received on or before October 1, 1977.

FOR FURTHER INFORMATION CON-  
TACT:

Robert R. Kifer, Physical Scientist,  
Policy and Programs Development Of-  
fice, Office of Coastal Zone Manage-  
ment, 3300 Whitehaven Parkway, Page  
One Building, Washington, D.C. 20235  
(202-634-4241).

## SUPPLEMENTARY INFORMATION:

On June 4, 1974, The National Oceanic and Atmospheric Administration (NOAA) published 15 CFR Part 921 entitled, "Estuarine Sanctuary Guidelines" pursuant to then section 312 of the Coastal Zone Management Act of 1972, as amended, for the purpose of establishing policy and procedures for the selection, acquisition, and management of estuarine sanctuaries.

Under new subsection 315(1) of the Act, the Secretary of Commerce is authorized to make available to coastal States grants of up to 50 per centum of the cost of acquisition, development, and operation of estuarine sanctuaries. In general, subsection 315(1) provides that grants may be awarded to States on a matching basis to acquire, develop, and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to implement this program.

As a result of two years of program implementation, the regulations are proposed to be modified to specifically authorize the granting of acquisition money to States in two stages:

(i) An initial grant for such preliminary purposes, as surveying and assessing the land to be acquired, and the development of management procedures and research programs; and

(ii) A second grant for the actual acquisition of the land. The Federal share of the sum of the two grants shall not

exceed 50 percent of the acquisition costs involved. Any State receiving an initial grant shall be obligated to repay it if, due to any fault of the State, the sanctuary is not established.

As a result of this new grant procedure, much more information relating to costs, values, management procedures, and research programs will be available at the time of the publication of a draft environmental impact statement. Proposals made public to date in the form of an Environmental Impact Statement (EIS) have been criticized for lack of specificity in these areas. By making a small preliminary acquisition grant to a State, the estuarine sanctuary proposal can be more fully developed and the public can become more aware of the costs and the exact nature of the long-term management.

In response to State questions about estuarine sanctuary research, the proposed regulations provide that such research can be funded if it can be shown to be related to program administration.

NOAA has reviewed these proposed regulations pursuant to the National Environmental Policy Act of 1969 and has determined that promulgation of these regulations will have no significant impact on the environment.

*Compliance with Executive Order 11821.* The economic and inflationary impact of these proposed regulations has been evaluated in accordance with OMB Circular A-107 and it has been determined that no major inflationary impact will result.

Dated: August 26, 1977.

T. P. GLEITER,  
Assistant Administrator  
for Administration.

It is proposed to amend 15 CFR Part 921 as follows:

(1) By revising the table of contents and authority citation to read as follows:

Subpart A—General	
Sec.	
921.1	Policy and objectives.
921.2	Definitions.
921.3	Objectives and implementation of the program.
921.4	Biogeographic classification.
921.5	Multiple use.
921.6	Relationship to other provisions of the Act and to marine sanctuaries.
Subpart B—Application for Grants	
921.10	General.
921.11	Application for preliminary acquisition grants.
921.12	Application for land acquisition grants.
921.13	Application for operational grants.
921.14	Federally-owned lands.
Subpart C—Selection Criteria	
921.20	Criteria for selection.
921.21	Public participation.
Subpart D—Operation	
921.30	General.
921.31	Changes in the sanctuary boundary, management policy, or research program.
921.32	Program review.

**AUTHORITY:** Sec. 315(1), Coastal Zone Management Act of 1972, as amended (90 Stat. 1030, (16 U.S.C. 1461) Pub. L. 94-370).

(2) By revising Subpart B—Application for Grants—as follows:

## Subpart B—Application for Grants

## § 921.10 General.

Section 315 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Associate Administrator for Coastal Zone Management (OCZM), Office of Coastal Zone Management, Page 1, 3300 Whitehaven Parkway NW, Washington, D.C. 20235. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

## § 921.11 Application for preliminary acquisition grants.

(a) A grant may be awarded on a matching basis to cover costs necessary to preliminary actual acquisition of land. As match to the Federal grant, a State may use money, the cost of necessary services, the value of foregone revenue, and/or the value of land either already in its possession or acquired by the State specifically for use in the sanctuary. If the land to be used as match already is in the State's possession and is in a protected status, the State may use such land as match only to the extent of any revenue from the land foregone by the State in order to include it in the sanctuary. Application for a preliminary acquisition grant shall be made on form SF 424 application for Federal assistance (non-construction programs).

(b) A preliminary acquisition grant may be made for the defrayal of the cost of:

(1) An appraisal of the land, or of the value of any foregone use of the land, to be used in the sanctuary;

(2) The development of a Uniform Relocation Assistance and Real Property Acquisition Policies Act plan;

(3) The development of a sanctuary management plan;

(4) The development of a research and educational program; and/or,

(5) Such other activity of a preliminary nature as may be approved in writing by OCZM. Any grant made pursuant to this subsection shall be refunded by the State to whatever extent it has spent in relation to land not acquired for the sanctuary, and if OCZM requests such refund.

(c) The application should contain:

(1) Evidence that the State has conducted a scientific evaluation of its estuaries and selected one of those most representative.

(2) Description of the proposed sanctuary including location, proposed boundaries, and size. A map(s) should be included, as well as an aerial photograph if available.

(3) Classification of the proposed sanctuary according to the biogeographic scheme set forth in § 921.4.

(4) Description of the major physical, geographic, biological characteristics and resources of the proposed sanctuary.

(5) Demonstration of the necessary authority to acquire or control and manage the sanctuary.

(6) Description of existing and potential uses of, and conflicts within, the area if it were not declared an estuarine sanctuary; and potential use restriction and conflicts if the sanctuary is established.

(7) List of protected sites, either within the estuarine sanctuaries program or within other Federal, State, or private programs, which are located in the same region or biogeographic classification.

(8) The manner in which the State solicited the views of interested parties.

(9) In addition to the standard A-95 review procedures, the grant application should be sent to the State Historic Preservation Office for comment to insure compliance with section 106 of the National Preservation Act of 1966.

(d) In order to develop a truly representative scheme of estuarine sanctuaries, the States should coordinate their activities. This will help to minimize the possibility of similar estuarine types being proposed in the same region. The extent to which neighboring States were consulted should be indicated.

#### § 921.12 Application for land acquisition grants.

(a) Acquisition grants will be made to acquire land and facilities for estuarine sanctuaries that have been thoroughly described in a preliminary acquisition grant application, or where equivalent information is available. Application for an acquisition grant shall be made on SF 424 application for Federal assistance (construction program).

In general, lands acquired pursuant to this subsection are legitimate costs and their fair market value, developed according to Federal appraisal standards, may be included as match. The value of lands donated to the State and cash donations may also be used as match. If the State already owns land which is to be used in the sanctuary, the value of any use of the land foregone by the State in order to include such land in the sanctuary, capitalized over the next 20 years, may be used by the State as match. The value of lands purchased by a State within the boundaries of proposed sanctuaries while an application for a preliminary acquisition grant or land acquisition grant is being considered may also be used as match.

(b) An acquisition application should contain the following information:

(1) Description of any changes in proposed sanctuary from that presented in the preliminary acquisition grant application. If such an application has not been made, then, information equivalent to that required in such a grant application should be provided.

(2) Identification of ownership patterns, proportions of land already in the

public domain; fair market value appraisal and Uniform Relocation Act plan.

(3) Description of research programs, potential and committed research organizations or agencies, and benefits to the overall coastal zone management program.

(4) Description of proposed management techniques, including the management agency and proposed budget—including both State and Federal shares.

(5) Description of planned or anticipated land and water use and controls for contiguous lands surrounding the proposed sanctuary (including, if appropriate, an analysis of the desirability of creating a marine sanctuary in adjacent areas).

(6) Assessment of the environmental, and socio-economic impacts of declaring the area an estuarine sanctuary, including the economic impact on the surrounding community and its tax base.

(7) Discussion, including cost and feasibility of alternative methods for acquisition and protection of the area.

#### § 921.13 Application for operation grants.

(a) Although an acquisition grant application for creation of an estuarine sanctuary should include initial operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional operational funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 315 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications (Form SF 424) for Federal assistance (non-construction program), for such operational grants should include at least the following information:

(1) Identification of the boundary (map).

(2) Specifications of the research and management programs, including management agency and techniques.

(3) Detailed budget.

(4) Discussion of recent and projected use of the sanctuary.

(5) Perceived threats to the integrity of the sanctuary.

#### § 921.14 Federally-owned lands.

(a) Where Federally-owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies. Such lands and State request, and the Federal agency response, should be identified and conveyed to the Office of Coastal Zone Management.

(b) Where such proposed use or control of Federally-owned lands would not

conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 315 grants may not be awarded to Federally-owned lands; however, a similar status may be provided on a voluntary basis for Federally-owned lands under the provisions of the Federal Committee on Ecological Reserves program.

#### § 921.20 [Amended]

(4) Subpart C—Selection Criteria—is amended by changing the first sentence in § 921.20 to read: "Applications for preliminary acquisition or land acquisition grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:"

(5) Section 921.21 is revised, as follows:

#### § 921.21 Public participation.

(a) Public participation in the selection of an estuarine sanctuary is required. In the selection process, the selecting entity (see § 921.10) shall seek the views of possibly affected landowners, local governments, and Federal agencies, and shall seek the views of possibly interested other parties and organizations. The latter would include, but need not be limited to, private citizens and business, social, and environmental organizations in the area of the site being considered for selection. This solicitation of views may be accomplished by whatever means the selecting entity deems appropriate, but shall include at least one public hearing in the area. Notice of such hearing shall include information as to the time, place, and subject matter, and shall be published in the principal area media. The hearing shall be held no sooner than 15 days following the publication of notice.

(b) The Office of Coastal Zone Management (OCZM) shall prepare draft and final environmental impact statements pertaining to the site finally selected for the estuarine sanctuary following public participation in the selection of that site, and shall distribute these as appropriate. OCZM may hold a public hearing in the area of such site at which both the draft environmental impact statement (DEIS) and the merits of the site selection may be addressed by those in attendance. OCZM shall hold such a hearing if: (1) In its view, the DEIS is controversial, or (2) If there appears to be a need for further informing the public with regard to either the DEIS or one or more aspects of the site selected, or (3) if such a hearing is requested in writing (to either the selecting entity or (CZM) by an affected or interested party, or (4) for other good cause. If held, such hearing shall be held no sooner than 30 days following the issuance of the DEIS and no sooner than 15 days after appropriate notice of such hearing has been given in the area by OCZM with the assistance of the selecting entity.

control of Federally-owned lands would not [FR Doc 83-23168 Filed 9-3-77; 8:45 am]

## APPENDIX II

### Article 4. Ecological Reserves (Added by Stats. 1968, Ch. 1257)

1580. For the purpose of protecting rare or endangered native plants, wildlife or aquatic organisms or specialized habitat types both terrestrial and aquatic, the department, with the approval of the commission, may obtain by purchase, lease, gift or otherwise, land and water for the purpose of establishing ecological reserves. Such ecological reserves shall not be classed as wildlife management areas pursuant to Section 1504 and shall be exempt from the provisions of Section 1504.

(Amended by Stats. 1977, Ch. 1181.)

1581. Any property acquired in fee for ecological reserves shall be acquired in the name of the state, and shall, at all times, be subject to such rules and regulations as may be prescribed from time to time by the commission for the occupation, use, operation, protection, and administration of such property as ecological reserves.

(Added by Stats. 1968, Ch. 1257.)

1582. The department shall do all things necessary to secure a valid title in the state to the property acquired in fee for ecological reserves but no payment shall be made therefor until the title is vested in and satisfactory to the state. No such land will be acquired by eminent domain.

(Added by Stats. 1968, Ch. 1257.)

1583. Except in accordance with the regulations of the commission it is unlawful to enter upon any ecological reserves established under the provisions of this article, or to take therein any bird or the nest or eggs thereof, or any mammal, fish, mollusks, crustaceans, amphibia, reptiles or any other form of plant or animal life.

(Added by Stats. 1968, Ch. 1257.)

1584. As used in this article, "ecological reserve" refers to land or land and water areas preserved in a natural condition for the benefit of the general public to observe native flora and fauna and for scientific study.

(Added by Stats. 1968, Ch. 1257.)

# APPENDIX III

## Birds, Fish, Plants, Animals, and Shellfish of Elkhorn Slough

### Bird Life of Elkhorn Slough and Moss Landing Harbor

<u>Common Name</u>	<u>Scientific Name</u> <sup>1/</sup>	Population Peak, Number and Month (1967-68)
<u>Shorebirds</u>		
Avocet, American	<u>Recurvirostra americana</u>	R <sup>2/</sup> 606 Dec.
Curlew long-billed	<u>Numenius americanus</u>	M 147 Aug.
Dowitcher, long-billed	<u>Limnodromus scolopaceus</u>	M 45 Jan.
Dowitcher, short-billed	<u>Limnodromus griseus</u>	M 40 Jan.
Dunlin	<u>Erolia alpina</u>	M 524 Nov.
Godwit, marbled	<u>Limosa fedoa</u>	M 1454 Dec.
Killdeer	<u>Charadrius vociferus</u>	R 210 Dec.
Knot	<u>Calidris canutus</u>	M 1 Apr.
Phalarope, northern	<u>Lobipes lobatus</u>	M 8175 Oct.
Phalarope, red	<u>Phalaropus fulicarius</u>	M 4 Feb.
Phalarope, Wilson's	<u>Steganopus tricolor</u>	M 34 Aug.
Plover, American golden	<u>Pluvialis dominica</u>	M 3/ --
Plover, black-bellied	<u>Squatarola squatarola</u>	M 105 Jan.
Plover, semipalmated	<u>Charadrius semipalmatus</u>	M 32 Apr.
Plover, snowy	<u>Charadrius alexandrinus</u>	R -- --
Sanderling	<u>Crocethia alba</u>	M 227 Nov.
Sandpiper, Baird's	<u>Erolia bairdii</u>	M 5 Apr.
Sandpiper, least	<u>Erolia minutilla</u>	M 530 Dec.

<sup>1/</sup> Scientific names from Peterson's A Field Guide to Western Birds

<sup>2/</sup> R=resident  
M=migrant

<sup>3/</sup> Not recorded on Department censuses

<sup>4/</sup> Escaped exotic

<sup>5/</sup> Rarely

<u>Common Name</u>	<u>Scientific Name</u>	<u>Population Peak, Number, and Month (1967-1968)</u>		
Sandpiper, pectoral	<u>Erolia melanotos</u>	M	12	Sept.
Sandpiper, spotted	<u>Actitis macularia</u>	M	1	Feb.
Sandpiper, western	<u>Ereunetes mauri</u>	M	1460	July
Snipe, common	<u>Capella gallinayo</u>	M	1	Feb., April
Stilt, black-necked	<u>Himantopus mexicanus</u>	R	30	Feb.
Surfbird	<u>Aphriza virgata</u>	M	--	--
Turnstone, black	<u>Arenaria melanocephala</u>	M	6	Aug.
Turnstone, ruddy	<u>Arenaria interpres</u>	M	5	June
Yellowlegs, greater	<u>Totanus melanoleucus</u>	M	6	Nov.
Yellowlegs, lesser	<u>Totanus flavipes</u>	M	1	Jan., Apr., May
Willet	<u>Catoptrophorus semipalmatus</u>	M	1874	Aug.
Whimbrel	<u>Numenius phaeopus</u>	M	40	Apr.
<u>Wading Birds</u>				
Bittern, American	<u>Botaurus lentiginosus</u>	M	--	--
Egret, common	<u>Casmerodius albus</u>	M	15	Jan.
Egret, reddish	<u>Dichromanassa rufescens</u>	M	1	Aug., Nov.
Egret, snowy	<u>Leucophoyx thula</u>	M	26	Mar.
Flamingo, American	<u>Phoenicopterus ruber</u>	4/	1	--
Heron, great blue	<u>Ardea herodias</u>	M	45	Jan., Dec.
Heron, black-crowned night	<u>Nycticorax nycticorax</u>	R	1	Aug., Nov.
<u>Gulls and Terns</u>				
Gull, Bonaparte's	<u>Larus philadelphia</u>	M	207	Mar.
Gull, California	<u>Larus californicus</u>	M	1202	Nov.
Gull, glaucous-winged	<u>Larus glaucescens</u>	M	15	Mar., Apr.
Gull, herring	<u>Larus argentatus</u>	M	40	Mar.
Gull, Heerman's	<u>Larus heermanni</u>	M	705	Dec.
Gull, mew	<u>Larus canus</u>	M	320	Jan.



<u>Common Name</u>	<u>Scientific Name</u>	<u>Population Peak, Number, and Month (1967-68)</u>
Gull, ring-billed	<u>Larus delawarensis</u>	M 44 Mar.
Gull, western	<u>Larus occidentalis</u>	M 396 Oct.
Kittiwake, black-legged	<u>Rissa tridactyla</u>	M -- --
Tern, black	<u>Chlidonias niger</u>	M 1 Aug.
Tern, Caspian	<u>Hydroprogne caspia</u>	M 37 June
Tern, common	<u>Sterna hirundo</u>	M 11 Sept.
Tern, elegant	<u>Thalasseus elegans</u>	M 9 Oct.
Tern, Forster's	<u>Sterna forsteri</u>	R 208 April
Tern, least	<u>Sterna albifrons</u>	M 1 Mar., April
Tern, royal	<u>Thalasseus maximus</u>	M -- --
<u>Waterfowl</u>		
Brant, black	<u>Branta nigricans</u>	M 9 April
Bufflehead	<u>Bucephala albeola</u>	M 62 Feb.
Canvasback	<u>Aythya valisineria</u>	M 14 Dec.
Gadwall	<u>Anas strepera</u>	M 12 April
Golden-eye, common	<u>Bucephala clangula</u>	M 27 Jan.
Goose, lesser Canada	<u>Branta canadensis parvipes</u>	M -- --
Goose, Ross	<u>Chen rossii</u>	M 1 Feb.
Goose, snow	<u>Chen hyperborea</u>	M 1 Dec., Jan.
Goose, white-fronted	<u>Anser albifrons</u>	M 19 Jan.
Mallard	<u>Anas platyrhynchos</u>	R 50 Aug.
Merganser, red-breasted	<u>Mergus serrator</u>	M 13 Jan.
Oldsquaw	<u>Clangula hyemalis</u>	M 3 Jan., Feb.
Pintail	<u>Anas acuta</u>	M 147 Dec.
Redhead	<u>Aythya americana</u>	M 2 Dec.
Ring-necked duck	<u>Aythya collaris</u>	M 11 Dec.
Ruddy duck	<u>Oxyura jamaicensis</u>	M 932 Jan.
Scaup, greater	<u>Aythya marila</u>	M 395 Dec.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Population Peak, Number, and Month (1967-68)</u>
Scaup, lesser	<u>Aythya affinis</u>	M
Shoveler	<u>Spatula clypeata</u>	M 248 Feb.
Scoter, common	<u>Oidemia nigra</u>	M 2 April, May
Scoter, surf	<u>Melanitta perspicillata</u>	M 397 Feb.
Scoter, white-winged	<u>Melanitta deglandi</u>	M 187 Dec., Mar.
Swan, whistling	<u>Olor columbianus</u>	M 16 Jan.
Teal, cinnamon	<u>Anas cyanoptera</u>	M 300 Aug.
Teal, green-winged	<u>Anas carolinensis</u>	M 119 Mar.
Widgeon, American	<u>Mareca americana</u>	M 25 April

Miscellaneous Marsh and Water-Associated Birds

Coot, American	<u>Pulica americana</u>	R 1004 Oct.
Grebe, eared	<u>Podiceps caspicus</u>	M 38 Feb.
Grebe, horned	<u>Podiceps auritus</u>	M 50 April
Grebe, pied-billed	<u>Podilymbus podiceps</u>	R 14 Nov.
Grebe, western	<u>Aechmophorus occidentalis</u>	R 5/113 Jan
Kingfisher, belted	<u>Megasceryle alcyon</u>	-- --
Rail, clapper	<u>Rallus longirostris</u>	R 4 June
Rail, Virginia	<u>Rallus limicola</u>	R -- --

Miscellaneous Coastal and Pelagic Birds

Cormorant, Brandt's	<u>Phalacrocorax penicillatus</u>	M 3 Sept.
Cormorant, double-crested	<u>Phalacrocorax auritus</u>	M 4 Feb.
Cormorant, pelagic	<u>Phalacrocorax pelagicus</u>	M 1 Mar.
Guillemot, pigeon	<u>Cephus columba</u>	M 4 Aug., Feb.
Loon, artic	<u>Gavia artica</u>	M 4 May
Loon, common	<u>Gavia immer</u>	M 3 May
Loon, red-throated	<u>Gavia stellata</u>	M 4 Jan.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Population Peak, Number, and Month (1967-68)</u>		
Murre, common	<u>Uria aalge</u>	M	1	Sept., May
Murrelet, ancient	<u>Synthliboramphus antiquum</u>	M	2	Sept.
Pelican, brown	<u>Pelecanus occidentalis</u>	M	2243	Aug.
Pelican, white	<u>Pelecanus erythrorhynchos</u>	M	17	Dec.
<u>Land-associated Birds</u>				
Blackbird, Brewer's	<u>Euphagus cyanocephalus</u>	R	--	--
Blackbird, red-winged	<u>Agelaius phoeniceus</u>	R	--	--
Blackbird, tricolor	<u>Agelaius tricolor</u>	M	--	--
Bushtit, common	<u>Psaltiriparus minimus</u>	M	--	--
Crow, common	<u>Corvus brachyrhynchos</u>	R	--	--
Dove, mourning	<u>Zenaidura macroura</u>	M	--	--
Eagle, golden	<u>Aquila chrysaetos</u>	M	--	--
Finch, house	<u>Carpodacus mexicanus</u>	M	--	--
Flicker, red-shafted	<u>Colaptes cafer</u>	M	--	--
Flycatcher, western	<u>Empidonax difficilis</u>	M	--	--
Goldfinch, American	<u>Spinus tristis</u>	R	--	--
Hawk, marsh	<u>Circus cyaneus</u>	M	--	--
Hawk, red-tailed	<u>Buteo jamaicensis</u>	M	--	--
Hawk, sparrow	<u>Falco sparverius</u>	R	--	--
Jay, scrub	<u>Apelocoma coerulescens</u>	M	--	--
Kinglet, ruby-crowned	<u>Regulus calendula</u>	M	--	--
Kite, white-tailed	<u>Elanus leucurus</u>	R	--	--
Lark, horned	<u>Eremophila alpestris</u>	M	--	--
Magpie, yellow-billed	<u>Pica nuttali</u>	M	--	--
Meadowlark, western	<u>Sturnella neglecta</u>	R	--	--
Owl, short-eared	<u>Asio flammeus</u>	M	--	--
Pheasant, ring-necked	<u>Phasianus colchicus</u>	R	--	--

<u>Common Name</u>	<u>Scientific Name</u>	<u>Population Peak, Number, and Month (1967-68)</u>		
Phoebe, black	<u>Sayornis nigricans</u>	R	--	--
Phoebe, Say's	<u>Sayornis saya</u>	M	--	--
Pigeon, band-tailed	<u>Columba fasciata</u>	M	--	--
Pipit, water	<u>Anthus spinoletta</u>	M	--	--
Quail, California	<u>Lophortyx californicus</u>	R	--	--
Shrike, loggerhead	<u>Lanius ludovicianus</u>	R	--	--
Sparrow, golden-crowned	<u>Zonotrichia atricapilla</u>	R	--	--
Sparrow, house	<u>Passer domesticus</u>	R	--	--
Sparrow, savannah	<u>Passerculus sandwichensis</u>	R	--	--
Sparrow, song	<u>Melospiza melodia</u>	R	--	--
Sparrow, swamp	<u>Melospiza georgiana</u>	M	--	--
Sparrow, white-crowned	<u>Zonotrichia leucophrys</u>	R	--	--
Starling	<u>Sturnus vulgaris</u>	M	--	--
Swallow, violet-green	<u>Tachycineta thalassina</u>	M	--	--
Towhee, brown	<u>Pipilo fuscus</u>	R	--	--
Thrasher, California	<u>Toxostoma redivivum</u>	R	--	--
Warbler, Audubon's	<u>Dendroica auduboni</u>	M	--	--
Wren, Bewick's	<u>Thryomanes bewickii</u>	R	--	--
Wren, long-billed marsh	<u>Telmatodytes palustris</u>	R	--	--

COMPARATIVE MONTHLY COUNTS (HIGHEST NUMBER) OF  
SHOREBIRDS CENSUSED FROM COASTAL WETLANDS

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bolinas Lagoon- Tomales Bay <sup>1/</sup>	-	-	-	-	-	-	-	4,505	5,575	<u>12,850</u>	10,899	-
	9,298	-	8,488	-	2,484	-	-	-	2,467	4,859	<u>12,220</u>	-
	6,911	5,736	14,051	<u>24,165</u>	-	-	-	-	-	-	-	-
South San Diego Bay <sup>2/</sup>	5,766	8,618	7,614	<u>13,678</u>	466	889	3,699	8,653	8,608	<u>9,750</u>	-	-
	-	-	-	-	-	-	-	23,477	<u>59,365</u>	14,995	52,811	-
	18,479	-	27,721	<u>34,643</u>	1,044	782	-	14,850	22,610	42,823	<u>58,644</u>	40,317
	-	29,127	9,105	<u>40,521</u>	1,694	788	6,555	7,384	<u>20,922</u>	-	-	-
Elkhorn Slough <sup>2/</sup>	6,244	4,228	7,718	<u>17,067</u>	341	300	3,915	6,127	3,753	<u>17,457</u>	16,826	8,821
	10,869	<u>11,191</u>	9,010	9,018	504	836	-	-	-	-	-	-

<sup>1/</sup> - aerial census

<sup>2/</sup> - on foot

LIST OF FISHES COLLECTED IN  
ELKHORN SLOUGH AND ITS ENVIRONS 1/

<u>Common Name</u>	<u>Scientific Name</u>	<u>Slough</u>	<u>Harbor</u>	<u>Pier &amp; Jetty</u>
Anchovy, northern	<u>Engraulis mordax</u>	x	x	
Bass, striped	<u>Marone saxatilis</u>	x	x	
Boccacio	<u>Sebastes paucispinis</u>	x	x	
Cabazon	<u>Scorpaenichthys marmoratus</u>	x	x	x
Croaker, white	<u>Genyonemus lineatus</u>		x	x
Flounder, starry	<u>Platichthys stellatus</u>	x	x	x
Fringehead, onespots	<u>Neoclinus uninotatus</u>	x		
Fringehead, sarcastic	<u>Neoclinus blanchardi</u>			
Goby, arrow	<u>Clevelandia ios</u>	x	x	
Goby, bay	<u>Lepidogobius lepidus</u>	x		
Greenling, kelp	<u>Hexagrammos</u> sp.		x	
Guitarfish, shovelnose	<u>Rhinobatos productus</u>	x	x	
Hake, Pacific	<u>Merluccius productus</u>		x	
Halibut, California	<u>Paralichthys californicus</u>	x	x	
Herring, Pacific	<u>Clupea harengus pallasii</u>	x	x	
Jacksmelt	<u>Atherinopsis californiensis</u>	x	x	x
Lingcod	<u>Ophiodon elongatus</u>		x	x <u>2/</u>
Lizardfish, California	<u>Synodus lucioceps</u>		x	
Lusk-eel	<u>Otophidium taylori</u>	x	x	
Mackerel, jack	<u>Trachurus symmetricus</u>	x	x	
Midshipman, plainfin	<u>Porichthys notatus</u>		x	
Mudsucker, longjaw	<u>Gillichthys mirabilis</u>	x	x	
Perch, black	<u>Embiotoca jacksoni</u>	x	x	x <u>2/</u>

1/ Nomenclature from American Fisheries Society Special Publication #6,  
Common and Scientific Names of Fishes from the United States and Canada.

2/ Species observed under the pier on scuba portion of study.

3/ Juveniles

<u>Common Name</u>	<u>Scientific Name</u>	<u>Slough</u>	<u>Harbor</u>	<u>Pier &amp; Jet</u>
Perch, dwarf	<u>Micrometrus minimus</u>	x	x	
Perch, pile	<u>Rhacochilus vacca</u>	x	x	x
Perch, reef	<u>Micrometrus aurora</u>	x		
Perch, shiner	<u>Cymatogaster aggregata</u>	x	x	x <u>2/</u>
Pipefish, bay	<u>Syngnathus griseolineatus</u>		x	
Pipefish, kelp	<u>Syngnathus californiensis</u>		x	
Pompano, Pacific	<u>Peprilus simillimus</u>	x	x	
Queenfish	<u>Seriphus politus</u>	x	x	
Ray, bat	<u>Myliobatis californica</u>	x	x	
Rockfish	<u>Sebastes sp.</u>		x	
Rockfish, blue	<u>Sebastes mystinus</u>	x <u>3/</u>		
Rockfish, brown	<u>Sebastes auriculatus</u>	x	x	
Rockfish, kelp	<u>Sebastes atrovirens</u>		x	
Rockfish, grass	<u>Sebastes rostelliger</u>	x <u>3/</u>		
Sanddab, Pacific	<u>Citharichthys sordidus</u>	x	x	
Sanddab, speckled	<u>Citharichthys stigmaeus</u>	x	x	x <u>2/</u>
Sardine, Pacific	<u>Sardinops sagax</u>	x	x	
Sculpin, Pacific staghorn	<u>Leptocottus armatus</u>	x	x	x
Seaperch, rainbow	<u>Hypsurus caryi</u>	x	x	x
Seaperch, rubberlip	<u>Rhacochilus toxotes</u>	x	x	
Seaperch, sharpnose	<u>Rhanerodon atripes</u>			x
Seaperch, striped	<u>Embiotoca lateralis</u>	x		x <u>2/</u>
Seaperch, white	<u>Phanerodon furcatus</u>	x	x	x
Shad	<u>Alosa sp.</u>		x	
Shad, American	<u>Alosa sapidissima</u>		x	
Shad, threadfin	<u>Dorosoma petenense</u>		x	
Shark, brown smoothhound	<u>Mustelus henlei</u>	x		
Shark, gray smoothhound	<u>Mustelus californicus</u>	x		
Shark, leopard	<u>Triakis semifasciata</u>	x	x	x

<u>Common Name</u>	<u>Scientific Name</u>	<u>Slough</u>	<u>Harbor</u>	<u>Pier &amp; Jett</u>
Skate	<u>Raja sp.</u>		x	
Skate, California	<u>Raja inornata</u>			x
Smelt, surf	<u>Hypomesus pretiosus</u>	x	x	
Snake eel, Pacific	<u>Ophichthus triserialis</u>	x	x	
Snake eel, spotted	<u>Ophichthus ophis</u>	x		
Smelt, whitebait	<u>Allosmerus elongatus</u>		x	
Sole, curlfin	<u>Pleuronichthys decurrens</u>	x		
Sole, English	<u>Parophrys vetulus</u>	x	x	x
Sole, sand	<u>Psettichthys melanostictus</u>		x	
Stickleback, threespine	<u>Gasterosteus aculeatus</u>		x	
Stingray, round	<u>Urolophus halleri</u>	x	x	
Surfperch, barred	<u>Amphistichus argenteus</u>		x	x
Surfperch, calico	<u>Amphistichus koelzi</u>	x		x
Surfperch, red-tailed	<u>Amphistichus rhodoterus</u>			x
Surfperch, silver	<u>Hyperprosopon ellipticum</u>			x 2/
Surfperch, spotfin	<u>Hyperprosopon anale</u>		x	
Surfperch, walleye	<u>Hyperprosopon argenteum</u>	x	x	x
Thornback	<u>Platyrrhinoides triseriata</u>	x		
Tomcod, Pacific	<u>Microgadus proximus</u>		x	
Tonguefish, California	<u>Symphurus atricauda</u>	x		
Topsmelt	<u>Atherinopsis affinis</u>	x	x	
Turbot, diamond	<u>Hypsopsetta guttulata</u>	x	x	
Wolf-eel	<u>Anarrhichthys ocellatus</u>			x



# MISCELLANEOUS PLANTS AND ANIMALS\*

<u>Common Name</u>	<u>Scientific Name</u>
<b>Plants:</b>	
1. Bulrushes	<u>Scirpus spp.</u>
2. Cattail	<u>Typha spp.</u>
3. Eelgrass	<u>Zostera marina</u>
4. Frankenia	<u>Frankenia grandifolia</u>
5. Ice-plant	<u>Mesembryanthemum sp.</u>
6. Pickleweed	<u>Salicornia spp.</u>
7. Rushes	<u>Juncus spp.</u>
8. Saltgrass	<u>Distichlis spicata</u>
<b>Mammals:</b>	
1. Black-tailed deer	<u>Odocoileus hemionus columbianus</u>
2. Brush rabbit	<u>Sylvilagus bachmani</u>
3. Bobcat	<u>Lynx rufus</u>
4. Coyote	<u>Canis latrans</u>
5. Gray fox	<u>Urocyon cinereoargenteus</u>
6. Jackrabbit	<u>Lepus californicus</u>
7. Muskrat	<u>Odonatra zibethica</u>
8. Raccoon	<u>Procyon lotor</u>
9. Seal	<u>Phocidae</u>
10. Sea lion	<u>Otaridae</u>
<b>Fish and Squid:</b>	
1. Albacore	<u>Thunnus alalunga</u>
2. Jack mackerel	<u>Trachurus lathami</u>
3. Petrale sole	<u>Eopsetta jordani</u>
4. Rex sole	<u>Glyptocephalus zachirus</u>
5. Rockfish	<u>Sebastes spp.</u>
6. Sablefish	<u>Anoplopoma fimbria</u>
7. Salmon	<u>Oncorhynchus spp.</u>
8. Squid	<u>Loligo opalescens</u>
<b>Shellfish:</b>	
1. European flat oyster	<u>Ostrea edulis</u>
2. Japanese mussel	<u>Modiolus sanhausi</u>
3. Japanese littleneck clam	<u>Tapes semidecussata</u>
4. Mexican oyster	<u>Crassostrea sp.</u>
5. Portuguese oyster	<u>Crassostrea angulata</u>

\* Not listed in check lists of birds, fish, and shellfish.

# SHELLFISH OF ELKHORN SLOUGH<sup>1/</sup>

## Crustaceans

<u>Common Name</u>	<u>Scientific Name</u>
Crabs and shrimp:	
Rock crab	<u>Cancer antennarius</u>
Yellow crab	<u>Cancer anthonyi</u>
Cancer crab	<u>Cancer gibbosulus</u>
Slender crab	<u>Cancer gracilis</u>
Cancer crab	<u>Cancer jordani</u>
Dungeness or market crab	<u>Cancer magister</u>
Red crab	<u>Cancer productus</u>
Purple shore crab	<u>Hemigrapsus nudus</u>
Shore crab or Oregon mud crab	<u>Hemigrapsus oregonensis</u>
Mottled pea crab	<u>Opisthopus transversus</u>
Porcelain crab	<u>Pachycheles rudis</u>
Lined shore crab	<u>Pachygrapsus crassipes</u>
Hermit crab	<u>Pagurus hirsutiusculus</u>
Hermit crab	<u>Pagurus samuelis</u>
Flat or Porcelain crab	<u>Petrolisthes cinctipes</u>
Commensal pea crab	<u>Pinnixa faba</u>
Commensal pea crab	<u>Pinnixa franciscana</u>
Commensal pea crab	<u>Pinnixa longipes</u>
Commensal pea crab	<u>Pinnixa schmitti</u>
Commensal pea crab	<u>Pinnixa tomentosa</u>
Commensal pea crab	<u>Pinnixa tubicola</u>

<sup>1/</sup> Compiled from Addicott, 1952; Eissinger, 1970; MacGinitie, 1935; Smith and Gordon, Jr., 1948. Some common names from Ricketts and Calvin, 1952; Fitch, 1953; Hedgpeth, 1967; and MacGinitie and MacGinitie, 1968.

Common Name

Kelp crab

Commensal pea crab

Ghost shrimp

Long-handed ghost shrimp

Bay shrimp

Gross shrimp

Broken back shrimp

Broken back shrimp

Blue mud shrimp

## Amphipods:

Water flea

Skeleton shrimp

Skeleton shrimp

Skeleton shrimp

Water flea

Water flea

Sand hopper

## Barnacles:

Acorn barnacle

Acorn barnacle

Gooseneck barnacle

Parasitic barnacle

## Copepods:

Parasitic copepod

Parasitic copepod

Parasitic copepod

Parasitic copepod

Scientific NamePugettia productaScleroplax granulataBetaeus longidactylusCallianassa californiensisCallianassa gigasCrago nigricaudaHippolyte californiensisSpirontocaris paludicolaSpirontocaris pictaUpogebia pugettensisAmpithoe lacertosaAoroides columbiaeCaprella acutifronsCaprella equilibraCaprella scauraCorophium salmonisCorophium spinicorneGammarus confervicolusBalanus nubilisBalanus tintinnabulumLepas hilliSacculina sp.Argulus melanostictusHemicyclops callianassaeHemicyclops thysanotusModiolicola gracilis

Common NameScientific Name

## Isopods:

Boring isopod (Gribble)

Limnoria lignorum

Pill bug

Livoneca vulgaris

Isopod

Pentidotea resecata

Commensal isopod

Phyllodurus abdominalis

## Mollusks

## Snails and Nudibranchs:

Nudibranch

Aeolida papillosa

Sea slug

Aplysia californicus

Nudibranch

Coryphella sp.

Nudibranch

Dendronotus sp.

Nudibranch

Doto sp.

Nudibranch

Galvina sp.

Bubble shell

Haminoea vesicula

Nudibranch

Hermisenda crassicornis

Sea slug

Navanax inermis

Sea slug

Philine sp.

## Oysters, clams and mussels:

Giant Pacific oyster

Crassostrea gigas

Eastern oyster

Crassostrea virginica

Rockboring mussel

Lithophaga plumula

Bay mussel

Mytilus edulis

Fat horsemussel

Volshella capax

Horsemussel

Volshella diegensis

Straight horsemussel

Volshella recta

California soft-shelled clam

Cryptomya californica

Nestler clam

Kellia laperousii

Inconspicuous macoma

Macoma inconspicua

<u>Common Name</u>	<u>Scientific Name</u>
Sand clam	<u>Macoma</u> <u>inquinta</u>
Irus macoma	<u>Macoma</u> <u>irus</u>
Bent-nosed clam	<u>Macoma</u> <u>nasuta</u>
White sand clam	<u>Macoma</u> <u>secta</u>
California mactra	<u>Mactra</u> <u>californica</u>
Mactra	<u>Mactra</u> <u>dolabiformis</u>
Geoduck	<u>Panope</u> <u>generosa</u>
Wart-necked piddock	<u>Pholadidea</u> <u>ovoidea</u>
Boring clam	<u>Pholadidea</u> <u>penita</u>
Petricola clam	<u>Petricola</u> <u>carditoides</u>
Common littleneck	<u>Protothaca</u> <u>staminea</u>
Thin shelled littleneck	<u>Protothaca</u> <u>tenerrima</u>
California reversed clam	<u>Pseudochama</u> <u>exogyra</u>
Commensal clam	<u>Pseudophthina</u> <u>rugifera</u>
Purple clam	<u>Sanguinolaria</u> <u>nuttalli</u>
Saxicava clam	<u>Saxicava</u> <u>arctica</u>
Common Washington clam	<u>Sacidomus</u> <u>nuttallii</u>
Razor clam	<u>Siliqua</u> <u>lucida</u>
Northern razor clam	<u>Siliqua</u> <u>patula</u>
Sickle razor clam	<u>Solen</u> <u>sicarius</u>
Dish clam	<u>Spisula</u> <u>planulata</u>
California jackknife clam	<u>Tagelus</u> <u>californianus</u>
Bodega tellen	<u>Tellina</u> <u>bodegensis</u>
Tellen	<u>Tellina</u> <u>buttoni</u>
Pismo clam	<u>Tivela</u> <u>stultorum</u>
Gaper clam	<u>Tresus</u> <u>nuttallii</u>
Boring clam	<u>Zirfaea</u> <u>gabbi</u>
Rough piddock	<u>Zirfaea</u> <u>pilsbryi</u>

<u>Common Name</u>	<u>Scientific Name</u>
Miscellaneous mollusks:	
Angular unicorn snail	<u>Acanthina spirata</u>
File limpet	<u>Acmaea limatula</u>
Butterfly limpet	<u>Acmaea persona</u>
Ribbed limpet	<u>Acmaea scabra</u>
Shipworm	<u>Bankia setacea</u>
Basket cockle	<u>Clinocardium nuttallii</u>
Slipper shell	<u>Crepidula nivea</u>
Keyhole limpet	<u>Diodora aspera</u>
Rock scallop	<u>Hinnites multirugosus</u>
Cooper's chiton	<u>Ischonchiton cooperi</u>
Waddling snail	<u>Lacuna porrecta</u>
Chink shell	<u>Lacuna unifasciata</u>
Chiton	<u>Lepidochitona raymondi</u>
Checkered littorina (Perwinkle)	<u>Littorina scutulata</u>
Hairy-girdled chiton	<u>Mopalia ciliata</u>
Mossy chiton	<u>Mopalia muscosa hindsii</u>
Mossy chiton	<u>Mopalia muscosa</u>
Channeled basket shell	<u>Nassarius fossatus</u>
Purple olive	<u>Olivella biplicata</u>
Checked borer	<u>Platyodon cancellatus</u>
Abalone jingle	<u>Pododesmus cepio</u>
Moon shell	<u>Polinices draconis</u>
Moon shell	<u>Polinices lewisii</u>
Black turban	<u>Tegula funebris</u>
Toredo	<u>Teredo diegensis</u>

## APPENDIX IV

### PRINCIPAL AGENCY AND ORGANIZATIONS

ORGANIZATION (AGENCY)	AUTHORITY (ENABLING LEGISLATION)	FOCUS (JURISDICTION)	MANAGEMENT (REGULATION)	PURPOSE (PRIMARY OBJECTIVE)	FUNCTION IN ELKHORN SLOUGH
<b>FEDERAL</b>					
1. U.S. Fish and Wildlife Service (Dept. of Interior)	Fish & Wildlife Act; Fish & Wildlife Coordination Act; Endangered Species Act; Land and Conservation Act; Migratory Bird Hunting Stamp Act	No direct jurisdictional authority. Significant fish and wildlife habitats.	Reviewing agency; coordinated through U.S. Corps of Engineers permit procedure. Recommended acquisition areas with power of eminent domain.	Preservation and enhancement of fish and wildlife resources.	Prospective landowner, range manager.
2. U.S. Coast Guard (Dept. of Transportation)		Navigational safety - coastal and intercoastal waterways. U.S. territorial waters.	Reviewing agency; coordinated through U.S. Corps of Engineers permit procedure.	Maintaining uniform navigational safety codes (i.e., proper design, markings of navigational aids).	Review and comment on activities affecting navigation.
3. NOAA (Dept. of Commerce)	Reorganization Plan #4 of 1978 plus legislation such as Marine Protection, Research and Sanctuaries Act	Significant coastal marine resources of U.S.	Reviewing agency; coordinated through U.S. Corps of Engineers permit procedure	Protection and enhancement of offshore marine and estuarine fisheries.	May contribute review of proposed research/management programs.
a) Marine Fisheries		All states with coastal zone (oceans, Gulf of Mexico, as well as Great Lakes and Long Island Sound)	Reviews, approves and administers federal-state coastal management programs	To assist states in developing and operating management programs for their coastal land and water resources.	Administer conditions established for operation of Estuarine Sanctuary. Prepare recommendations for grants to be issued by Secretary of Commerce for purchase and operation of sanctuary.
b) Office of Coastal Zone Management	Coastal Zone Management Act of 1972	Direct jurisdictional authority over federally owned lands or federally funded projects.	Permit agency for point and non-point pollution discharges for projects involving federal funds or using federal land. Reviewing agency for physical environmental changes (i.e., structures).	Protection and enhancement of natural environment.	Indirectly influence environment of sanctuary and adjacent lands through establishment of air quality and water quality standards.
4. EPA	National Environmental Policy Act of 1969; Federal Water Pollution Control Act; Clean Air Act	Direct permit authority pertaining to the placement of structures or performing work in navigable waters of U.S. (up to MHW) Section 10. Also authority pertaining to placement of fill material (including dredge spoils) into historical or existing wetlands (Sec. 404).	Permit agency for physical environment changes (i.e., piers, dikes). Periodic (approximately every three years) dredging in Moss Landing harbor.	Maintaining navigability of U.S. waters in accord with environmental constraints.	Review application for changes in channel or structures which may influence navigation in Elkhorn Slough.
5. U.S. Army Corps of Engineers	River and Harbor Act, Section 10; Federal Water Pollution Control Act, Section 404				

ORGANIZATION (AGENCY)	AUTHORITY (ENABLING LEGISLATION)	FOCUS (JURISDICTION)	MANAGEMENT (REGULATION)	PURPOSE (PRIMARY OBJECTIVE)	FUNCTION IN ELKHORN SLOUGH
STATE					
1. State Land Commission	State of California Sovereignty	Entire state not in private or other public ownership	Control of development use by "alienation" of certain lands retaining navigational or other appropriate easements.	Control and management of lands under California sovereignty in best public interest	Ownership and control of certain submerged and tidal lands in Elkhorn Slough corresponding to "core" area. Final jurisdictional determination scheduled for early 1979.
2. State Parks and Recreation	State of California Public Resources Code	Promotion of public use and recreation in appropriate natural areas. Other use of acquired areas including the establishment of preserves or reserves.	Acquisition and management.	Preservation of natural and historic features with accommodation for recreational use.	Preservation of important historic/archeologic sites. Provision of interpretative material for educational use.
3. Department of Fish and Game and Wildlife Conservation Board	State Fish and Game Code; Wildlife Conservation Law of 1947	Entire state	Reviewing agency: coordinated through Resources Agency. Limited acquisition with no power of eminent domain. Exception: WCB, under special code provisions.	Preservation, protection, and enhancement of State Wildlife Resources. Regulates public use of these resources. Acquires and develops projects for recreation and conservation of wildlife.	Preserve, protect, and enhance fish and wildlife resources in Elkhorn Slough. Manage ecological reserves, wildlife management areas, etc. Candidate lead agency for Estuarine Sanctuary.
4. State Water Resources Control Board	Porter-Cologne Act, Federal Water Pollution Control Act	Entire state	NPDES permit agency: coordinated through Resources Agency and Regional Water Quality Control Board. Permit required only for proposed projects with significant effluent discharges.	Maintain sufficient supply and quality of state water resources.	Control off-site waste disposal on lands and waters in and adjacent to Elkhorn Slough.
5. State Coastal Commission and Regional Coast Commission (Monterey County Local Coastal program is scheduled to assume management in 1981)	State Coastal Act, 1976	Designated Coastal Zone	Permit authority and land use restrictions and development controls via zoning ordinance and review.	Regulation of coastal zone development to accommodate wetlands and other environmentally sensitive habitats.	Submit application to OCZM for Estuarine Sanctuary, or endorse and approve application by other agencies within state. Review and approve work program, local coastal plan, grant or withhold permits for activities within or adjacent to Elkhorn Slough.
6. Air Resources Board	Mulford-Carroll Act, Federal Clean Air Act	Entire state. Enforcement of ambient air quality standards by monitoring and controlling significant existing or proposed air pollutant generators.	Requirement for adequate mitigation on proposed projects to maintain or improve existing air quality. Enforcement of increasingly stringent motor vehicle emission requirements.	Maintenance and improvement of existing state air quality.	Control emissions in air basin, particularly local industrial installations.
7. California Department of Transportation	California Transportation Code	Entire state. Transportation-related construction, maintenance, and monitoring.	Acquisition with power of eminent domain following public review.	Maintenance and improvement of state transportation system.	May realign or reconstruct existing Highway 1 bridge over Elkhorn Slough. May provide access from Caltrans property to points within proposed Estuarine Sanctuary.
8. State Department of Health	California Health and Safety Code	Entire state	Public health protection and education.	Prevention, elimination or control of health hazards.	Provide Regional Water Quality Control Board with standards for effluent discharge.
9. University of California	Statewide. Santa Cruz and Berkeley campuses and primary centers with interest in Elkhorn Slough.			Education and research.	Conduct research and educational activities. Possible acquisition of land for university land and water reserves.



ORGANIZATION (AGENCY)	AUTHORITY (ENABLING LEGISLATION)	FOCUS (JURISDICTION)	MANAGEMENT (REGULATION)	PURPOSE (PRIMARY OBJECTIVE)	FUNCTION IN ELKHORN SLOUGH
STATE (continued)					
10. California State College System through Moss Landing Marine Laboratory	Coordination and funding of five California State Col- leges and Universities.	Marine and estuarine re- search and higher educa- tion.	Ownership of laboratory facilities and other re- search equipment.	A field station for academic research and educational use.	Conduct baseline inventories, other research and educational activities.
LOCAL					
1. Moss Landing Harbor District	Senate Bill 1116 granting Trust Title	Submerged and tidal lands in Elkhorn Slough, Bennett Slough, and Old Salinas River Channel. Jurisdic- tion coincides with State Lands Commission boundaries.	Administrator of commerce and navigation uses. Limited leasing authority. Responsi- ble for dredging non-channel areas of Moss Landing Harbor.	Coordination and supervision of appropriate commercial and navigation uses.	Grant to lease Harbor District lands to Estuarine Sanctuary. Provide access to Estuarine Sanctuary. Provide services to boats, waste removal, etc.
2. Monterey County					
a) County Health Department	All county lands	Environmental health	Minimum lot size requirements for on-site wastewater treat- ment systems; maintenance re- quirements and periodic in- spection.	Regulation and enforcement of environmental health standards.	Approve and monitor waste disposal systems in and near sanctuary.
b) Planning Depart- ment		County wide planning		Develop plans for use and development within county.	Prepare local coastal plan for general area including sanctuary, with use controls or other restrictions in compliance with State Coastal Commission guidelines.
c) Supervisors		County wide administration	Final approval of ordinances, regulation, permits, etc.	Administer county government.	Approve county planning programs and pro- jects. Serve as landowner representative on clearinghouse committee.
PRIVATE					
1. The Nature Conser- vancy (TNC)	Private conservation funds	Significant natural areas.	Acquisition and management or transfer to other parties in accordance with TNC conserva- tion policies.	Preservation of areas with high ecological diversity and significance.	Purchase and/or manage lands included within or adjacent to the Estuarine Sanctuary. Purchase, hold and lease or sell lands to state.

## APPENDIX V

### SUGGESTED MONITORING FOR ELKHORN SLOUGH

#### I. Invertebrates

1. Several sites in the slough should be selected such that they represent the major infaunal associations. In each of these areas, a permanent sampling station should be established. These stations will be both intertidal and subtidal. At each of these stations, the following physical parameters should be monitored and/or established:
  - a. The elevation of the site, if intertidal, so that repeated measurements will indicate if erosion or deposition have occurred.
  - b. Sediment analysis, done each time the site is sampled.
  - c. Salinity and temperature measured each time samples are taken.
  - d. Tide level of the site.
  - e. If subtidal, then current measurements recorded.
2. At each station, the following biological information should be gathered:
  - a. Quantitative composition of the infauna. This is to be measured at least three times per year, corresponding to three oceanic periods. This will require several replicate samples.
  - b. Meiofauna analysis to look for larvae which are settling. This will be done in conjunction with larval settlement jars to determine times of settlement and kinds of larvae available.
  - c. Life history analysis of at least one of the dominant members of the community. Initially, this will be a large study, but may be reduced in later years.
3. In addition, some specialized monitoring will be needed. I suggest the following:
  - a. Monitor areas subject to considerable trampling to ascertain the effect of foot traffic on invertebrate communities.
  - b. Monitor existing clam beds to ascertain the effect of harvesting and work out methods necessary to insure the beds' continuance.
  - c. Photo quadrats. We should set up photo quadrats where the same area of the slough is photographed periodically to show what happens to in situ clam populations.

## II. Fishes

1. Sportfish: Creel censuses for fish, invertebrates, etc., both from shore and from skiffs.
2. Regular adult, juvenile and larvae fish samples to document any unusual changes in patterns. Stress live sampling without removal.
3. Monitor pesticide and trace metal levels in key organisms in relation to rainfall, run-off and land use activities.
4. Life history phenomena for dominant fishes; detailed analysis of use of slough by fishes. Check out feeding and reproductive habits.
5. Continued monitoring of shark derbies.

## III. Plants

Species composition and physiological data for plants along selected permanent transects in both marsh and slough, plus aerial photography.

## APPENDIX VI

### Comparison of Marine and Estuarine Sanctuary Programs

<b>Legislative Authority</b>	<b><u>Marine</u></b>	<b><u>Estuarine</u></b>
	Marine Protection, Research and Sanctuaries Act of 1972 PL 92-532, Title III October 23, 1972	Coastal Zone Management Act of 1972 PL 92-583 Section 312 October 27, 1972
<b>How Initiated</b>	NOAA action or nomination from any individual, organization, state or Federal agency	State request for grant
<b>Purpose</b>	Preservation or restoration of areas for their conservation, recreational, ecological or esthetic values	Creation of natural field laboratories to gather data and make studies of the natural and human processes occurring within the estuaries of the coastal zone.
<b>Area</b>	Ocean waters as far seaward as the outer edge of the continental shelf; coastal waters where the tide ebbs and flows; the Great Lakes and their connecting waters.	Estuarine water bodies and adjacent waters, wetlands and uplands to the extent they constitute a natural ecological unit
<b>Management</b>	NOAA or through various types of agreements with state and/or Federal agencies; ownership not necessarily an issue	State ownership and management
<b>Funding Authority</b>	Development & operation - full Federal funding.	Acquisition, development & operation - 50/50 match
<b>State Veto</b>	Throughout State waters.	Equivalent is to not request a grant.

## APPENDIX VII

### REFERENCES

1. U. S. Fish and Wildlife Service  
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3. Thomas R. Hammer, Robert E. Coughlin, Edward T. Horn, IV,  
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5. Ketchum, Bostick H., Editor,  
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6. Browning, Bruce M., et al. 1972  
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## APPENDIX VIII: LCP Work Tasks: North County Segment

- 601 Land Use Plan

### Summary

The County General Plan for the North County segment area consists of the various elements of the County General Plan which are essentially policy documents, and sectional land use plans which indicate land use designations and locally specific policies. Based on the analysis work in Category 500, county policies contained in the relevant General Plan elements, will be reviewed in this category and amendments will be proposed as necessary to conform to Coastal Act policies. Several County sectional land use plans including portions of the North County General Plan (1964, 1968), the Moss Landing Area Development Plans (1956 and 1973), Castroville General Plan, and the Marina Master Plan are now in effect in the North County segment. The various features of these sectional plans will be revised in this category as needed to carry out the requirements of the Coastal Act. For purposes of Coastal Commission review, the revisions will be consolidated and presented as a single land use plan for the North County segment including supportive text and policies.

A large part of the coastal zone area covered by these plans is included within the current County review of the North County Master Plan, a project initiated by the County exclusive of the requirements of the Coastal Act. It is the County's intent to coordinate preparation of the revised master plan for the North County with the LCP. This should allow for a maximum degree of efficiency in the two programs and also provides an opportunity to resolve planning problems that may result from the application of different policies and standards in the adjacent coastal zone and non-coastal zone areas.

The steps in preparing the overall land use plan for the north county segment described in the tasks below follow the plan development sequence described under Program Methodology in the beginning of this document.

To support to the overall land use plan for the North County segment, a special community plan will be prepared for the Moss Landing Area. This is necessary because Moss Landing is the focus of an exceptionally wide range of coastal issues that can best be resolved through more specific and detailed planning. The central question to be addressed in the community plan is whether further industrial and energy related development at Moss Landing is compatible with the protection of coastal resources and the community; identified as a community of special character. If such development is determined to be compatible, related issues concern the type, location and amount of acceptable development and the conditions under which it should be permitted. Because of these issues, CEIP (Coastal Energy Impact Program) funds awarded to the Central Coast Regional Coastal Commission will be used to finance most of the costs of the preparation of the special community plan. Several other issues, particularly future management and development of the Moss Landing Harbor will also be resolved within the framework of the community plan; because they are not directly tied to the industrial/energy question, those issues will not rely on CEIP funds.

### Objective

Review the analysis of plans, policies, ordinances or management practices completed in series 500 to establish which plans and policies are consistent with the Coastal Act. Retain consistent portions, make recommendations for changes of those portions found inconsistent. These recommendations shall be included as policies in the land use plan.

### Tasks

- .01 Prepare draft revisions to the Land Use Plan for the North County segment using the following steps.
  - A. Identify the land uses and intensities proposed by the County General Plan presently in effect for the area that conforms to the Coastal Act and retain these as portions of the North County Land Use Plan.
  - B. Identify the land uses and intensities proposed by the County General Plan that clearly conflict with the Coastal Act and propose revised uses and/or policies that will conform to the Act.
  - C. When proposed land uses or intensities are not clearly consistent or inconsistent with Coastal Act policies, land use selection shall be guided by Section 30007.5 of the Coastal Act which declares that "such conflicts be resolved in a manner which on balance is the most protective of significant coastal resources".
  - D. Include additional land uses and intensities identified from tasks 400-500 not proposed in the existing County General Plan.
- .02 All land uses identified as appropriate in steps A, B and C shall be evaluated for:
  - 1) Service system capacity. Are there public services such as water, wastewater disposal, or roads available with sufficient capacity available (existing or programmed) to serve the proposed uses and intensities. If capacities are limited, adequate capacity is to be reserved for Coastal Act priority uses. Data on capacities from Task Groups 402, 407, 410, 504, 511 and 513.
  - 2) Phasing. The provision of public services will be phased if not adequate to accomodate all of the projected development. The amount of development will also be phased to be within the same time frame as the provision of public services.
- .03 The Land Use Plan shall also contain:
  - 1) Designation of a rural-urban boundary (developed in 511 and 508) and stable buffers to agricultural land uses.
  - 2) Policies and Criteria for development of all land use types (residential, industry, agriculture, etc.)
  - 3) Policies and Criteria for development within or adjacent to sensitive habitat areas, agriculture, and hazard areas.
  - 4) Identification of all lands held in Public Trust.
  - 5) Designate service district boundaries (water, sewage treatment) and expansion areas.

• 601.04  
Summary

The Moss Landing area represents a unique focal point for coastal planning. As such, and because of its small (relative) size in the North County context, it will be the subject of a "community plan" similar to the Moss Landing Area plans of the past, but an otherwise new format for the County because it will serve as a "detail" of the North County LCP rather than as a separate area plan. The community plan would apply the land use policies of the North County LCP to a smaller scale, integrating Moss Landing Harbor Development plans, other public works development (such as Monterey Peninsula Water Pollution Control facilities, resource enhancement proposals, and special work related to prospective energy facility development or expansion). General land use issues (urban-rural boundaries, land use priorities) would be resolved in the North County LCP, as would overall conformance to all Coastal Act policies.

Work Task 601.04

Prepare a draft special community plan for the Moss Landing area. The plan will be prepared at 500' scale, with smaller-scale insets if necessary to illustrate particular plan features, and will include at least the area from Potrero Road on the south to Capurro's on the north, and from Monterey Bay on the west to SPRR on the east. A special effort will be made to obtain direct participation by regional, state and federal agencies and individuals, such as Moss Landing Harbor District, PG & E, the State Departments of Fish and Game and Parks and Recreation, U.S. Fish and Wildlife Service and Corps of Engineers, and Moss Landing Marine Laboratories. The plan development will include at least the following work items, with a detailed work program to be developed:

- A. Using analysis and preliminary recommendations from category 500 tasks to identify detail, display the recommendations of 601.01 (North County Land Use Plan) at 500' scale for the community plan area. Identify potential conflicts related to conformance with coastal policies.
- B. Investigate within Coastal Energy Impact Program guidelines, and using the assistance of utility companies and other agencies, potential development scenarios and resource impacts of further energy facility and energy-related development and energy expansion alternatives at Moss Landing. Prepare a study paper discussing these scenarios/impacts/alternatives. Identify potential conflicts related to conformance with other coastal policies.
- C. In cooperation with all special districts and other public works developers (e.g. Moss Landing Harbor, Water Pollution Control Agency), compile and display specific public facility development plans for the community plan area. Identify potential conflicts related to conformance with other coastal policies.
- D. In consultation with other resource agencies (e.g. USFWS, DFG, Moss Landing Marine Laboratories), identify and display specific resource enhancement and/or restoration needs for the community plan area. Identify potential conflicts related to conformance with other coastal policies.



- E. As a basis for resolving conflicts identified by A thru D above, prepare study paper evaluating alternative land use/intensity/policy plans as to
- relative protection of significant coastal resources (30001.5(a) and 30007.5).
  - satisfaction of larger than local needs such as access, recreation, commerce, and energy (30001.5(b) & (c), 30001.2).
  - priority for coastal dependent development (30001.5(d)).
  - long-term ability to implement the plan, retaining flexibility for the needs of future populations.
  - urban-rural boundaries.
- F. After agency and citizen review, recommend a community plan which most thoroughly addresses the requirements of the Coastal Act and the needs of the County. Prepare appropriate land use maps, text, and policies, and recommend development or modifications of zoning ordinances, capital improvement programs, other plans, and interagency agreements

SUMMARY BUDGET  
601.02 Moss Landing Special Community Plan

<u>Task</u>	<u>Staff</u>	<u>Days</u>	<u>Costs</u>	<u>Notes</u>
Detailed Work Program	Planner	2	126	
A	Planner	5	315	
	Graphics	2	112	
B	Consultant	-	4000	Funds from Central Coast Commission CEIP grant. Includes funding for tasks 514.01 and .02.
C	Planner	20	1260	
	Graphics	2	112	Includes funding for tasks 506.01 thru .04.
D	Planner	6	378	
	Graphics	2	112	
E	Planner	10	630	
F	Planner	30	1860	
	Graphics	5	260	
A thru F	Senior Planner	10	870	
TOTAL		94	6,035 4,000	LCP CEIP

601 Total Cost Estimate

Task	Personnel	Days	Cost
.01	Planner	20	\$1266
.02	"	5	
.03	"	20	\$1266
.04	"	94	\$6035
	Consultant		\$4000 (CEIP)
.01-.04	Senior Planner	10	\$870
.01-.04	Graphics	30	\$1668
	County Counsel	-	\$700

"602 Public Access Element"

Add the following tasks, products, and budget.

*New Category  
3/1/79  
(Monterey County)*

602 Public Access Element

Summary

Shoreline access problems and opportunities have been studied in categories 407 and 501 for the North County area. Preliminary access recommendations from 501 need to be integrated with the land use plan being developed in 601 above to ensure that impacts resulting from the proposed access element do not conflict with other objectives of the land use plan.

Objective

Prepare a public access element as part of the North County area LCP. The access element should carry out the intent of Coastal Act policies while being compatible with other parts of the segment's LCP.

Tasks

- £ 407*
- .01 Evaluate preliminary access recommendations from category 501, to determine any conflicts or inconsistencies with land use plan proposals in 601, including possible conflicts with circulation and transportation, natural resource protection, public safety, and private property rights. Modify access or land use proposals as appropriate to achieve compatibility. The Attorney General's office will be consulted as needed.
  - .02 Prepare policies and management recommendations to support the proposed access element, including criteria and standards for maintenance.
  - .03 Revise access proposals following public and agency review.

Products

Map, policies, and text constituting the Public Access element of the North County Area LCP.

Cost Estimate

<u>Task</u>	<u>Personnel</u>	<u>Days</u>	<u>Cost</u>
.01-.03	Planner	7	\$ 443
	Senior Planner	3	261
	Total staff	10	\$ 704

RECOMMENDED  
NORTH COUNTY SEGMENT  
WORK PROGRAM BUDGET SUMMARY

Staff Work Tasks	<u>A</u> Consultants	<u>B</u> Staff Costs (Salaries)
Category 100	N/A	\$6,489.00
" 200	N/A	422.00
" 400	2500	3,675.00
" 500	22489	13,911.00
" 601	C.E.I.P. 4000	11,805.00
" 602	N/A	704.00

Operating Expenses

Building Occupancy	\$2,117.00
Printing/Mailing Charges	1,250.00
Indirect Charges	6,091.00

Sub-total \$9,458.00

Insurance and Benefits	20% of B	7,400
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Augmentation for revising/ Reprinting Work Program	\$500.00
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Coastal Energy Impact Program Funds	
See 601	\$4,000.00

<u>LCP Total Budget</u>	<u>\$79,353.00</u>
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C.E.I.P.	\$4,000.00
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-from Sec. 8 T.13S. R.2E.

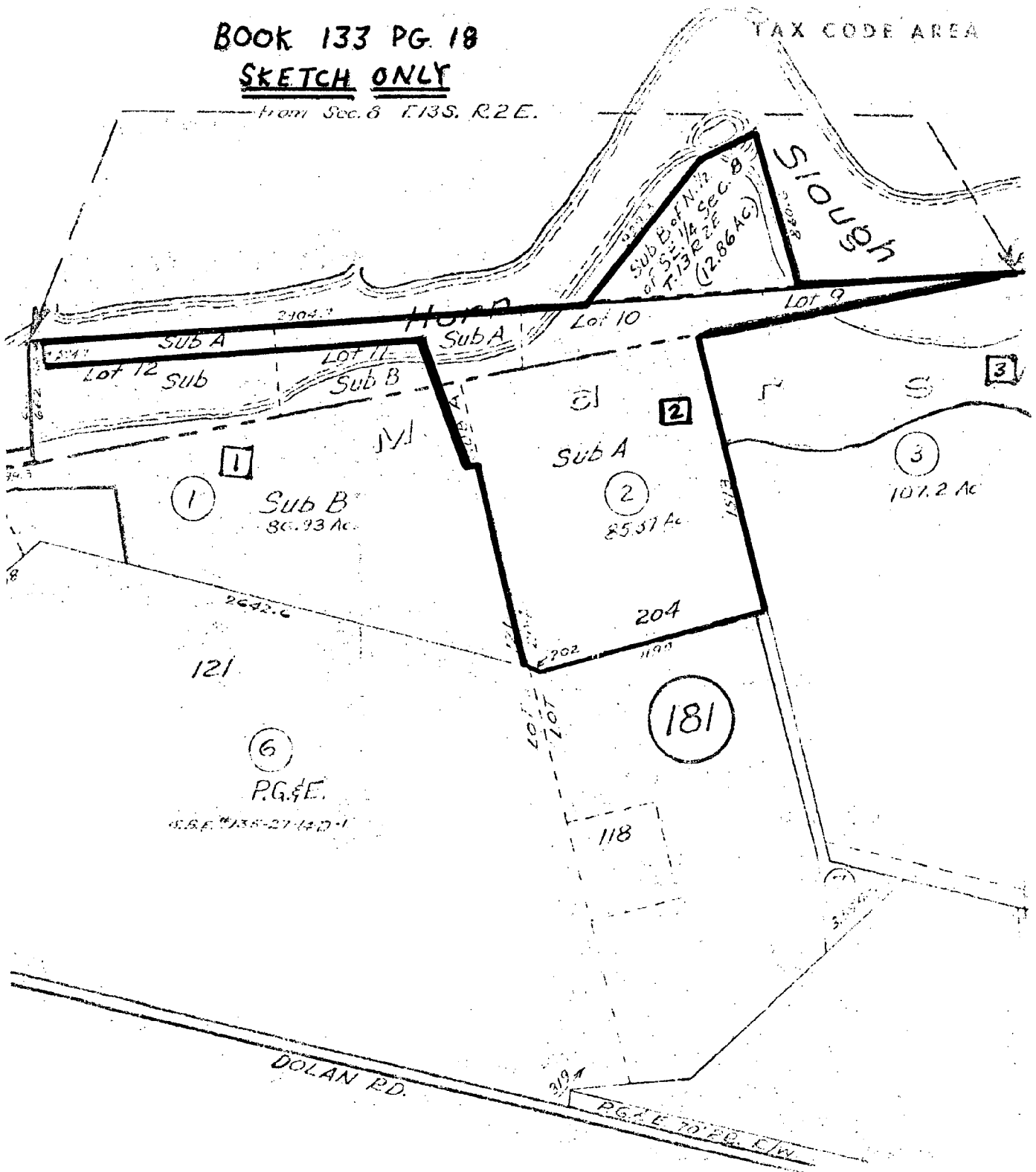


BOOK 133 PG. 18

SKETCH ONLY

From Sec. 8 T.13S. R.2E.

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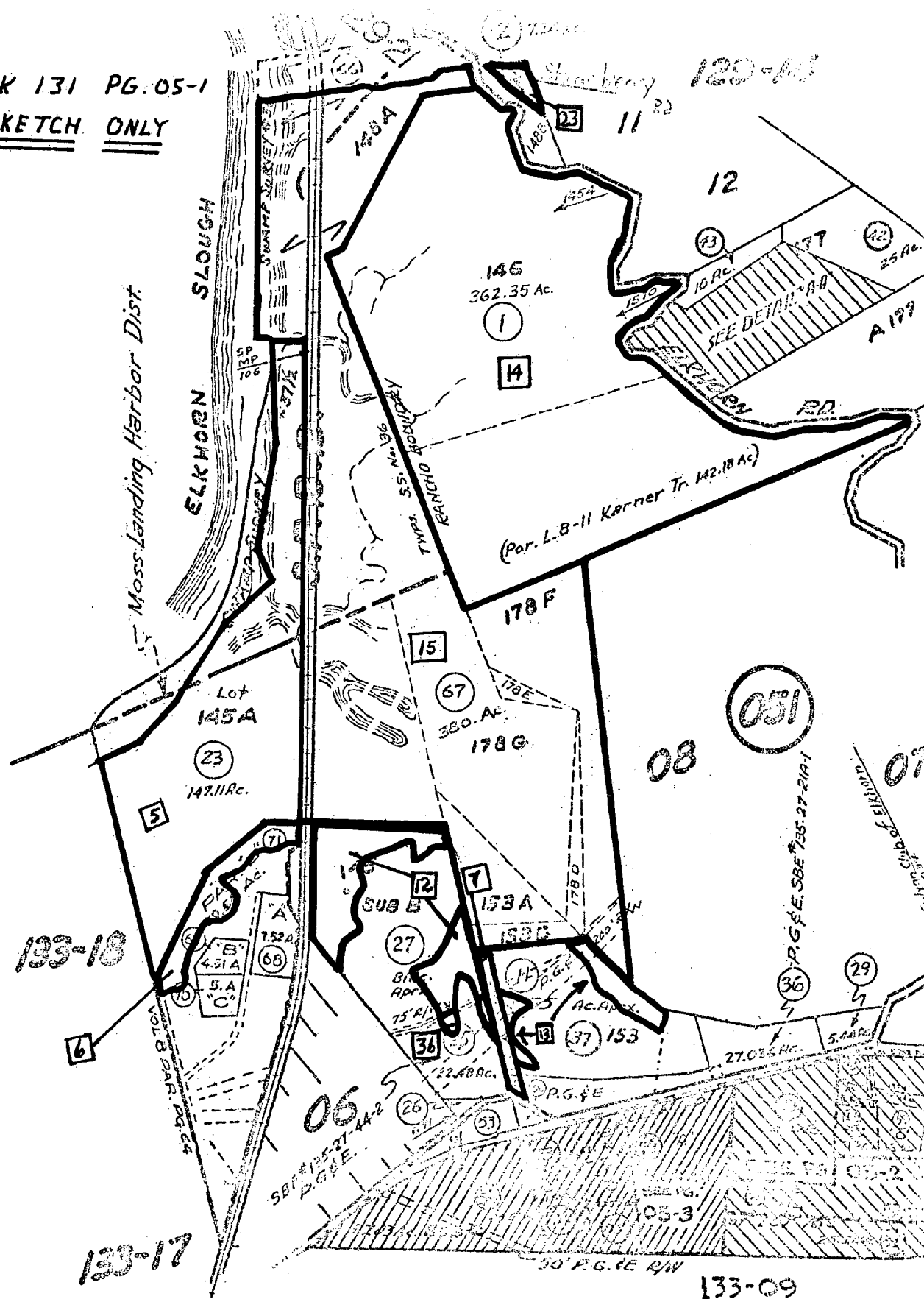


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CCAL F. 10. = 660 ft. or 10 chs.

BOLSA NUEVA Y MORE COJO Eo.  
LOTS 118, 121, 122, & 204  
TRP 13, 24 E. SEC 13 LOTS 9, 10, 11, 12 AND  
SUB. D & F N. 1/2 of SE 1/4

SKETCH ONLY



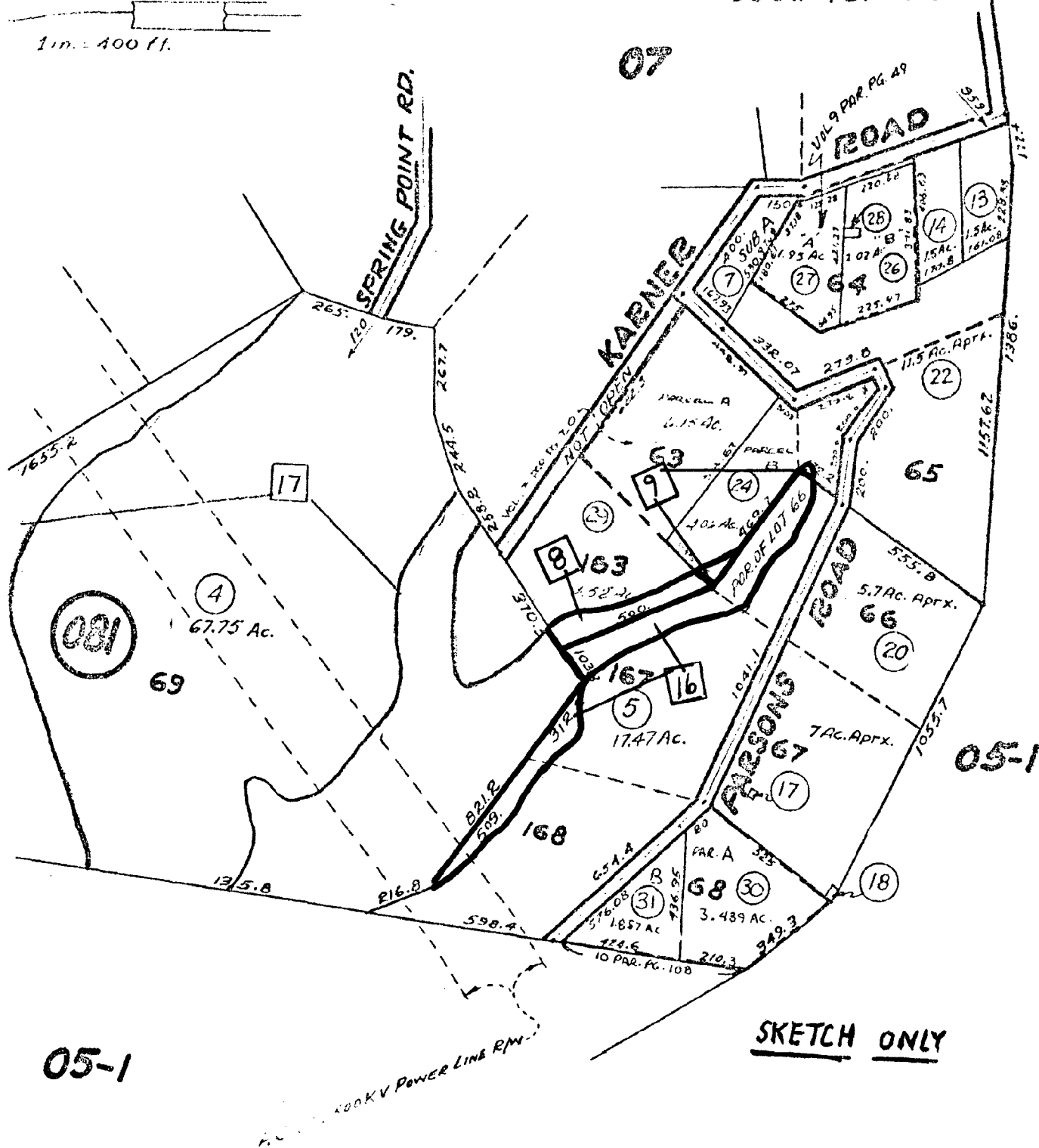
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COUNTY OF MONTEREY

ASSESSOR'S MAP

BOOK 131 PAGE 08

1 in. = 400 ft.



SKETCH ONLY

ASSR'S MAP No. 2

PAR. OF DEL MONTE FARMS

SUBDIVISION No. 2

BOLSA NUEVA Y' MORO COJO RANCH

1-18 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200



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B. MCC  
ASSR'  
BOSSA NUEVA  
TS / THY

56

DOLAN ROAD

300

05-1

RAILROAD

100' WIDE

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

SUB D

SUB A

SUB B

22.26 AC.

60.42 AC.

061

P.G. & E.

SBE #135-27-46-2

PG&E. 500KV. P.W.

200' R/W

DOLAN ROAD

05-3

B. MCCOY TRACT  
ASSR'S MAP  
BOLSA NUEVA Y MORO  
LOTS 1 THRU 6. OF SUB

ASSR'S MAF

BOLSA NUEVA Y MOBI  
LOTS 1 Thru 6. of SUB

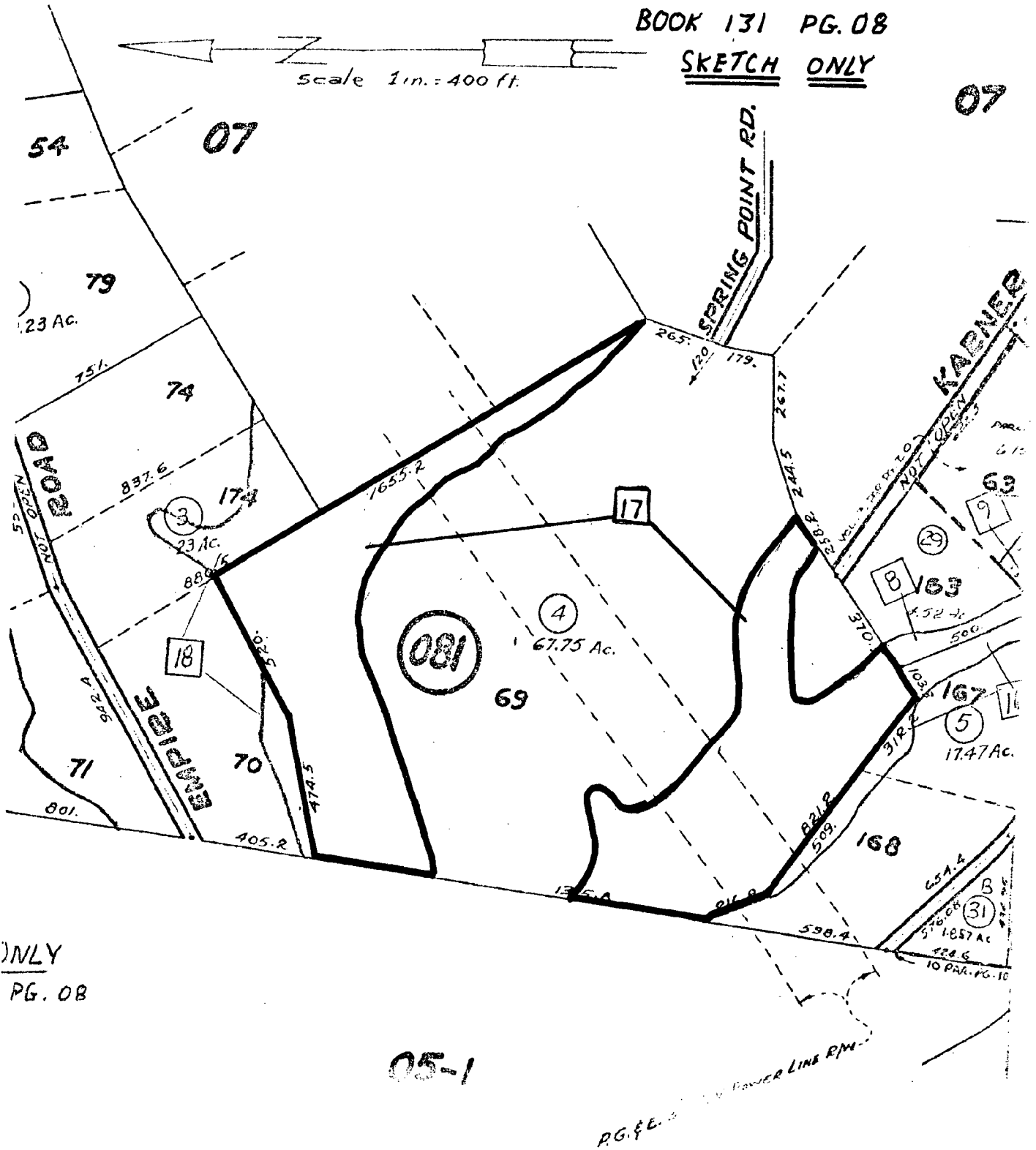
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BOOK 131 PG. 08

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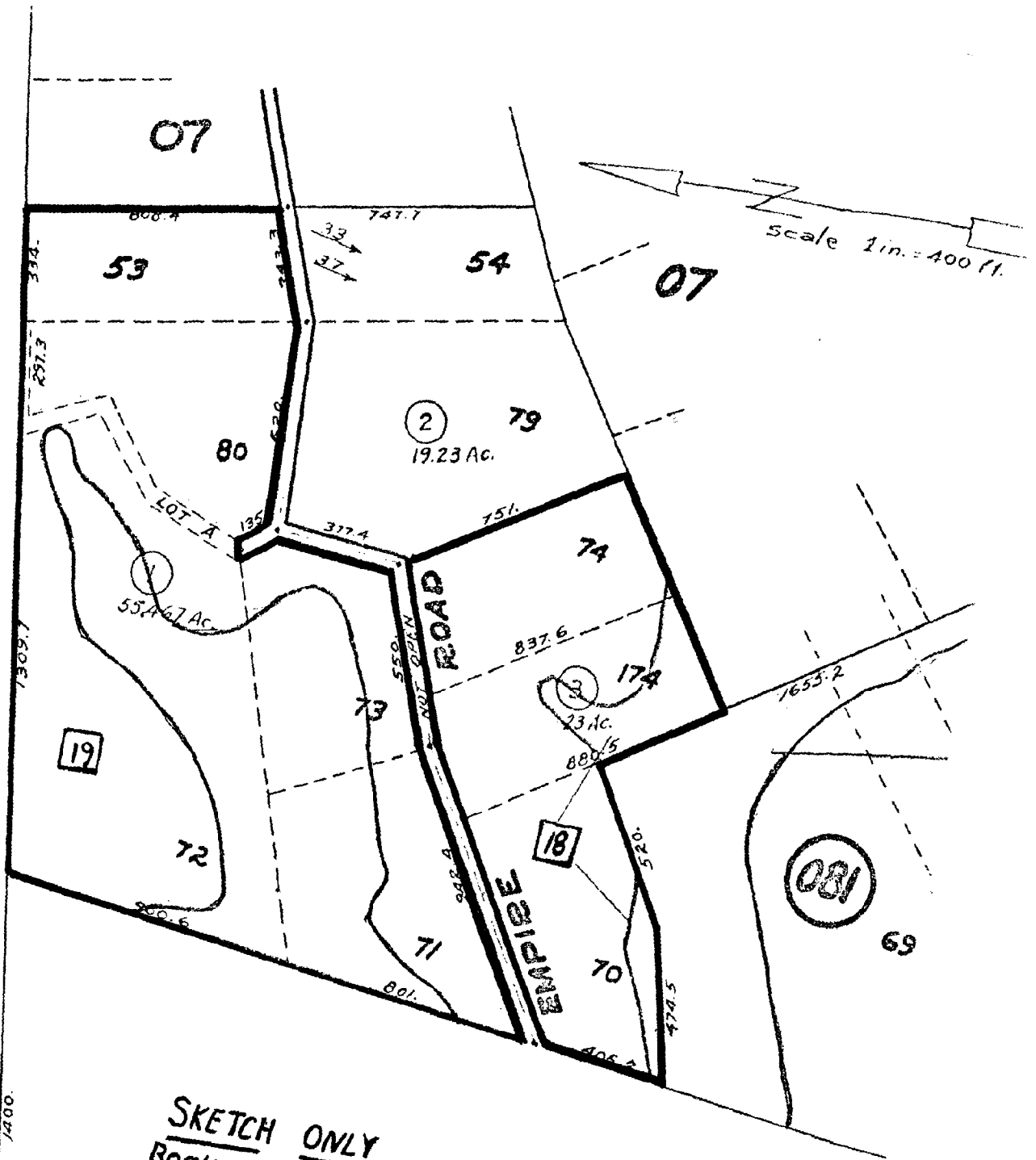


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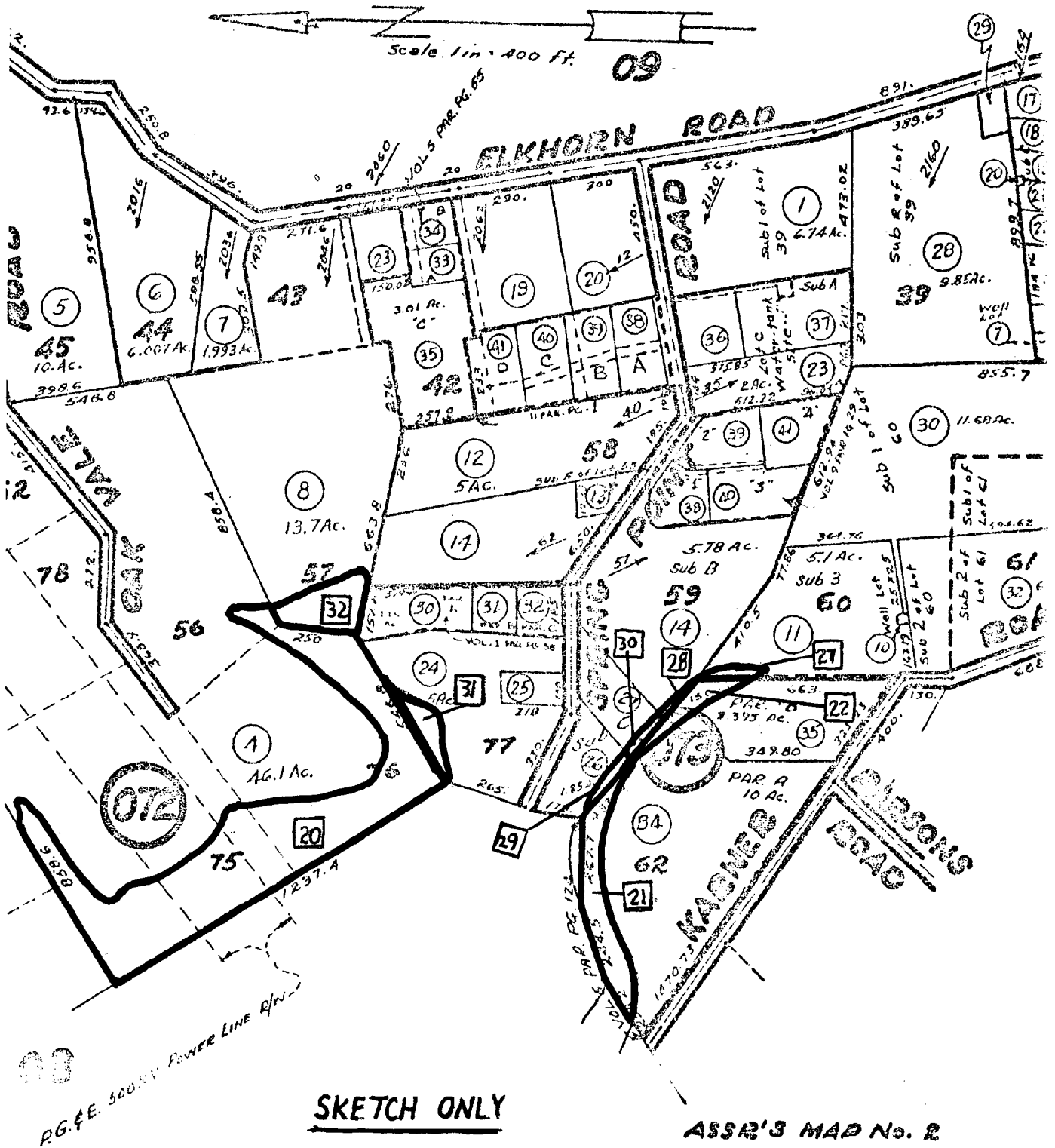
ASSR'S  
Dep. of DEL M  
SUDIN  
BOLSA NUEVA  
-- 701

05-1



SKETCH ONLY  
BOOK 131 PG. 08

05-1



ASSR'S MAP No. 2

PAR. OF DEL MONTE FARMS

SUBDIVISION No. 2

BOLSA NUEVA Y MOZO COJO A

Lots 39 thru 62, 56 thru 62, 75 thru 76, 101,

412-02

VOL. 1 A.M. PG. 6  
1790.67

181-19

9  
VOL. 6

212

26

②

PARCEL 2  
125.28 AC.

25

①

PARCEL  
37.34 AG.

C. P. R. R.

ELKHORN ROAD

HIDDEN VALLEY ROAD

14

3/10/52

BOLSA

413-01

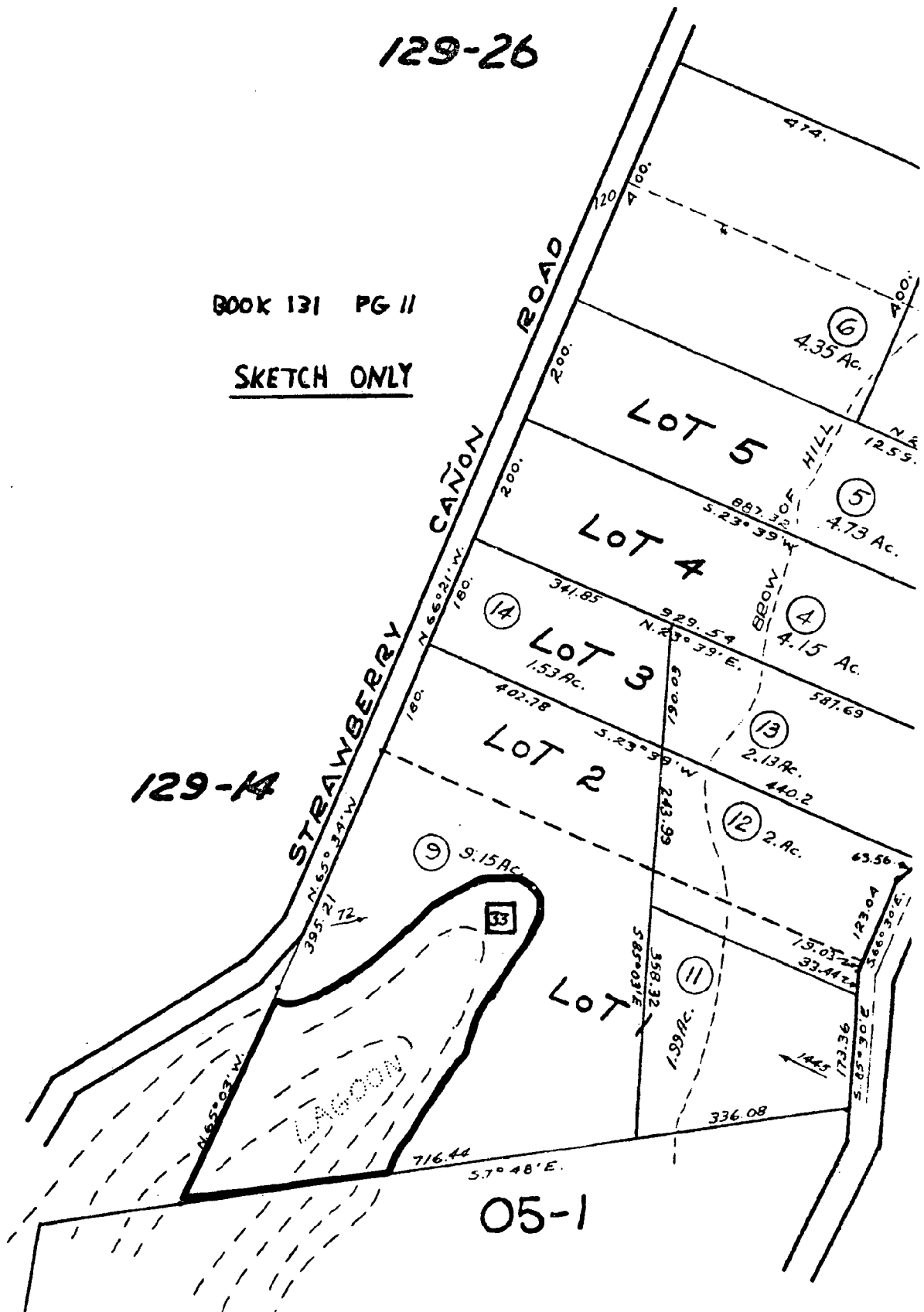
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129-26

BOOK 131 PG 11

SKETCH ONLY

129-14



181-01  
CARNEROS

TAX CODE AREA

BOOK 129  
PG 14

SKETCH ONLY

141

VOL 7 PPG 132  
15  
VOL 7 PPG 133  
10 PAR PG 141

VOL 7 PPG 115  
N 47° 52' E 229.64  
9 PAR PG 103

HIDDEN VALLEY RD.

SEE PG. 19

SEE PG. 21

ELKHORN ROAD

VOL 7 PPG 60

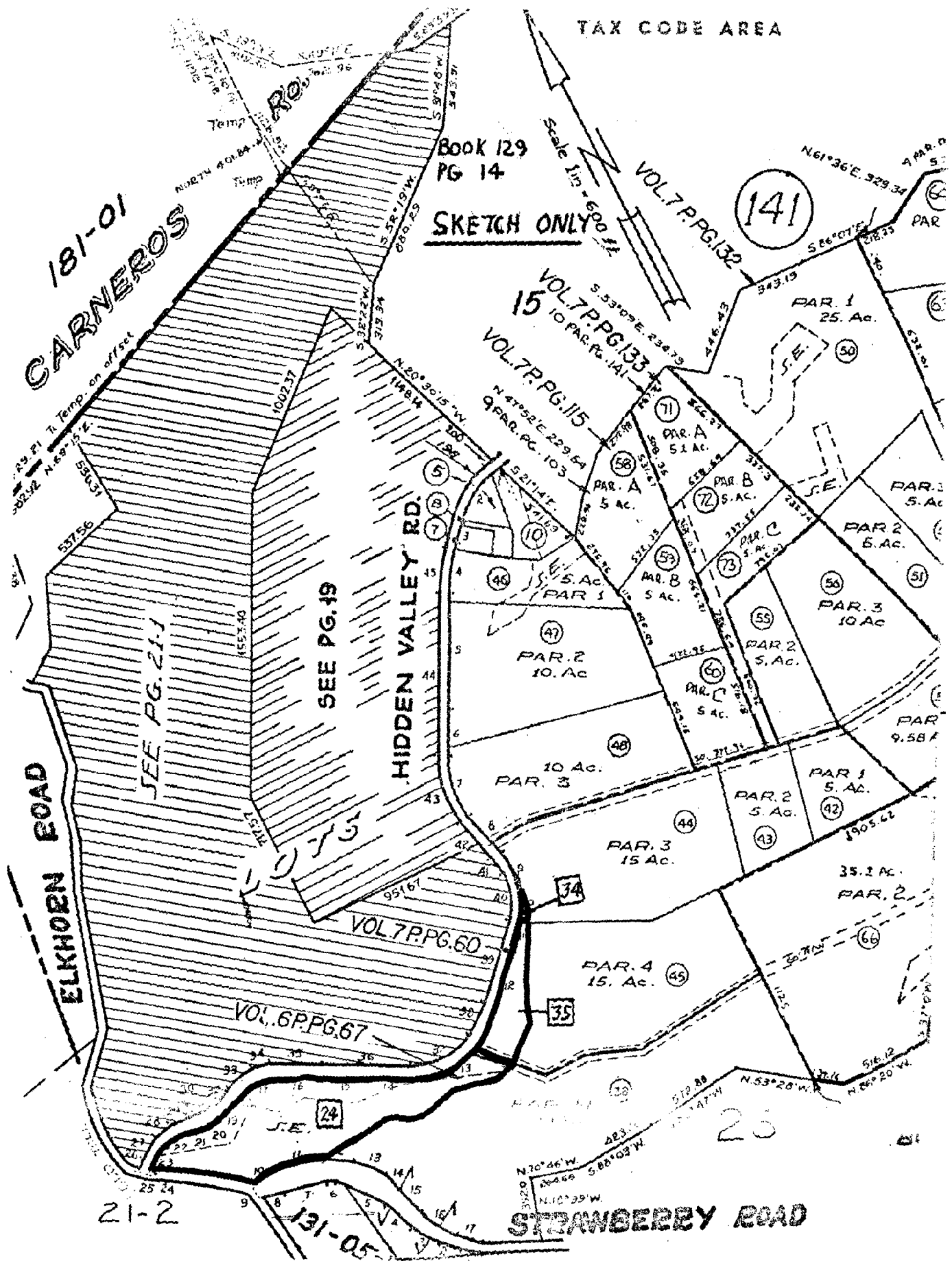
VOL 6 PPG 67

STRAWBERRY ROAD

21-2

131-05

25





## APPENDIX X

### Responses to Comments Received on the Elkhorn Slough Estuarine Sanctuary Draft Environmental Impact Statement

This section summarizes the written and verbal comments received on the Draft Environmental Impact Statement (DEIS) and provides OCZM's response to these comments. Generally, responses are made in one or more of the following ways:

- (1) Expansion, clarification, or revision of the DEIS
- (2) General responses to comments raised by several reviewers, and/or
- (3) Specific responses to the individual comments made by each reviewer.

OCZM will publish all comments in a compendium and distribute it to persons who commented on the DEIS, or anyone else upon request. Comments received after July 11, 1979, are not addressed but may be included in the compendium of comments.

The following are some of the most common issues raised by reviewers:

#### RESPONSES TO GENERAL COMMENTS

##### A. Impact of the Estuarine Sanctuary on Land Use Outside the Sanctuary Boundaries

Concern about land use outside the sanctuary has been expressed within a variety of issues. These have included the buffer concept outlined in the Madrone Study for the California Department of Fish and Game (CF&G), the applicability of the Resource Protection Zone (RPZ) included in the California Conservancy Act, the relationship of the Local Coastal Program (LCP, which is also called the Local Coastal Plan), and general concern over the restriction of private property rights, affecting residential, agricultural, and commercial uses. This concern also extends to control or restrictions over the commercial fishing industry, PG&E, Kaiser Refractories, and Moss Landing Harbor. It is felt that the estuarine sanctuary will have impacts on the issues mentioned above directly, or indirectly, by providing justification or a "cause" for more stringent Federal, State, or local regulations and controls in the use of the Elkhorn Slough region.

The following describes the California Coastal Commission and the LCP process, which is legally required under California law.

The Regional Coastal Commissions and State Coastal Commission were established under 1976 legislation, succeeding the temporary California Coastal Zone Conservation Commission's created by a 1972 statewide initiative. In 1976, legislation was passed requiring all local (city and county) governments within the coastal zone to prepare a coastal plan consistent with existing State policies. This legislation clearly placed

the primary responsibility upon the local government for the planning and implementation of the coastal zone management program. The major means of implementation is the preparation of Local Coastal Programs (LCP's) by local governments, with their review and certification by the Regional and State Coastal Commissions. Prior to certification of an LCP, the Regional Coastal Commission will retain interim permit authority over the coastal zone. The criteria for granting or denying permits by the commissions will be the policies of the 1976 California Coastal Act. After certification, the State Commission will retain limited appeal jurisdiction from locally granted permits, and the criteria for granting or denying permits will be the certified LCP.

The primary element of the local coastal program is the land use plan and related implementing actions (e.g. zoning, development criteria, resource management programs, etc.). This plan will designate the location, type, intensity, and priority of land uses for the portion of the local jurisdiction within the coastal zone. Thus, the Coastal Act provides a means for determining and resolving complex land use and resource management issues by identifying how to use, or not to use, the lands and waters of the California coast. The land use plan phase for the Elkhorn Slough region of Monterey County's LCP is due to be completed by June 1980, with the implementation and final certification due by December 1980.

Because of the national and statewide interest and significance of the Elkhorn Slough Wetland Complex, special local coastal planning efforts will be performed in the slough's watershed by Monterey County, in coordination with State and Federal resource management agencies. To assist in this planning program, special work tasks have been designed and funded by the State in Monterey County's LCP program to identify critical subwatersheds that surround the defined "ecological unit" of the Elkhorn Slough Complex. Within this special study area, much emphasis will be placed on establishing land uses based on natural as well as manmade constraints. LCP work tasks from Monterey County's North County segment, representing the summation of the data and analysis phases, are included in the FEIS Appendix. This planning will continue regardless of the decision concerning sanctuary establishment.

Land use planning is the legal responsibility of Monterey County and an estuarine sanctuary mandated by CF&G must be consistent with the certified LCP. The following statement has been added to the FEIS: "The estuarine sanctuary itself shall not require or impose land use planning within Monterey County outside the proposed boundaries."

The following describes the "Resource Protection Zone" (RPZ) in relation to the Estuarine Sanctuary. Sections 31300-31303 of the Coastal Conservancy Act of 1976 provide the intent of the California Legislature to establish buffer areas to be known as "Resource Protection Zones" surrounding public recreational and natural areas in the coastal zone, including fish and wildlife preserves.

The purpose of the RPZ proposals was to identify resource areas susceptible to adverse impacts and protect them by appropriate land use plans and ordinances (via the Local Coastal Program process--Coastal Act 1976) or by acquisition, dedication, easement, development rights, etc. It was the intent of this legislation to have the Coastal Conservancy Commission request Federal agencies that own or operate public resource areas in the coastal zone to take appropriate action to establish RPZs around such areas.

The RPZ concept, as it applies to the proposed Elkhorn Slough Estuarine Sanctuary, is as follows:

1. The Department of Fish and Game does not own any land in Elkhorn Slough at present, and has not prepared, nor will it prepare a plan for an RPZ at Elkhorn Slough. (Preparation of an RPZ requires that land acquisition must have closed on escrow by January 1, 1979)
2. The Department of Fish and Game recognizes that most existing uses surrounding the proposed sanctuary are either compatible, or will be planned for under existing regulations within the Coastal Act of 1976.
3. The U.S. Fish and Wildlife Service does not own any land at Elkhorn Slough at present; hence, it did not, and will not prepare an RPZ plan for the area.
4. The policy of the California Coastal Commission, at present, is that wherever Resource Protection Zones (RPZ's) are not identified, local jurisdictions (Monterey County) will analyze and identify--through the LCP process--appropriate land use activities and resource protection boundaries around State, local, or Federal resource areas such as estuarine sanctuaries or ecological reserves.

Also, the California Coastal Commission currently supports legislation that would delete the RPZ requirement from the Coastal Conservancy Act.

The following statement has been added to the FEIS; "There will be no RPZ established around the proposed estuarine sanctuary."

Activities associated with oil and gas exploration, development, and future transportation could pose potential adverse impacts on wetland resources of Monterey Bay. Analyses of such impacts will be included in the OCS #53 E.I.S., as well as limited tasks within the LCP being prepared by Monterey County, and the tasks of the Coastal Energy Impact Program (C.E.I.P.) of the Association of Monterey Bay Area Governments.

The "buffer zones" that were included in the Madrone Study are not incorporated into the estuarine sanctuary proposal. It has been concluded by OCZM and California Fish and Game that any planning, outside the proposed boundaries, is the proper function of other agencies--most notably Monterey County.

## B. Inadequate Public Hearing Notice, and Improper Location

At the public hearing in Monterey on June 20, 1979, several people indicated they had not received the DEIS and that the notification in the Santa Cruz and Monterey County newspapers was not adequate since they were not the papers that "local" residents read. It was also questioned why the hearing was held in Monterey, rather than Castroville, which is closer to the proposed project area: Elkhorn Slough.

The idea of acquisition and/or protection of Elkhorn Slough is not new. This area is listed as a "highest priority" for acquisition by the Wildlife Conservation Board using State bond monies. The area has been approved as a U.S. Fish and Wildlife Refuge and a portion is currently being acquired by the U.S. Fish and Wildlife Service. In early 1978, a public hearing was held in San Francisco, by the California Coastal Commission, and it nominated Elkhorn Slough as its candidate for funding as an estuarine sanctuary, and subsequent funding for a pre-acquisition study was given in August 1978. A portion of the funding was for Madrone Associates, and Jones and Stokes Associates to do a background study. As a part of their work process, they contacted 51 individuals representing the major institutions, agencies, or organizations with knowledge of, or an interest in, Elkhorn Slough (see p.138 of the Madrone Study for names). During 1979, OCZM and State of California staff met individually with many different organizations, including the Moss Landing Harbor District, PG & E, Kaiser Refractories, Moss Landing Marine Laboratory, and fishermen's organizations, and several individual landowners.

OCZM, as a matter of policy that is written into the Estuarine Sanctuary Guidelines, prepares draft and final environmental impact statements. Under NEPA regulations and OCZM Guidelines, the holding of a public hearing is optional, depending on several factors. OCZM holds a public hearing automatically as a matter of policy. The hearing in Monterey attracted over 100 individuals.

OCZM made a best effort attempt to distribute the DEIS to all interested parties and to provide notice of the public hearing. Recognizing the fact that some people didn't have the DEIS or see the notice in the newspapers; OCZM, at the public hearing in Monterey, extended the comment period on the DEIS for 15 days and scheduled a public meeting for June 22, 1979 in Castroville at 1:00 pm. The meeting in Castroville was also attended by more than 100 individuals. Still, concerns were expressed about lack of notice and lack of copies of the DEIS. OCZM therefore scheduled another public meeting for July 10, 1979, in Castroville. This meeting was advertised in 5 newspapers within a 40 mile radius of Elkhorn Slough. This meeting was attended by more than 300 people.

In regard to the original hearing being held in Monterey, OCZM made several calls in an attempt to locate a public hearing facility in Castroville for the June 20, 1979, public hearing. We were unsuccessful in

these attempts and then made arrangements for Monterey, which is approximately 20 miles from Castroville. We apologize for any inconvenience caused to individuals from the Elkhorn Slough area by having this hearing in Monterey.

We feel that there has been sufficient public involvement through oral and written comments received at the public hearing, public meetings, and written comments received at the OCZM offices. All of these comments have been incorporated into the FEIS, and changes have been made to reflect those comments, where appropriate.

C. Maps Were Difficult to Read.

Suggestions were made to improve the quality of the map, and comments were expressed that it was especially difficult to determine parcel boundaries proposed for acquisition.

The California Department of Fish and Game has prepared another map, which is included in the FEIS. Recognizing that it is very difficult to determine exact ownerships of the smaller parcels, individual assessor parcel maps have been included as Appendix 9. Please be aware that these maps are sketches only, and that the Wildlife Conservation Board will be glad to discuss property proposed for acquisition with the individual property owners on request.

D. The Money Being Made Available by Federal and State Agencies Is Insufficient to Pay Fair Price for Properties Stated for Acquisition.

The acquisition process (including safeguards and techniques) underlying the cost estimates for acquisition should be explained.

Preliminary estimates of value, based on limited comparable sales data, indicates the approximately 1,510 acres proposed for acquisition to be worth approximately \$3,000,000.

Although this valuation may appear low, it must be kept in mind that about one half of the total proposed acquisition area is considered wetlands. Existing restrictions that preclude or limit development of wetlands must be considered when valuing this area. Examples of these restrictions, which may vary somewhat with individual parcels, include the presence of a State Lands Commission easement for fisheries, navigation, and commerce; the Resources Agency's Wetland Policy; the Corps of Engineers' jurisdiction; and the Coastal Act, as administered by the Coastal Commission.

Also, some acquisitions may be negotiated whereby the State acquires less than fee interest, i.e. a conservation easement. The values of these easements are based on a percentage of the total appraised value, depending on the effect each given easement has on the value of the property involved.

Under Public Law 91-646, public acquisition of land can be made only after a fair market value appraisal of the property is completed and approved. These appraisals will be made by independent fee appraisers, and all property owners or their representatives will be given the opportunity to meet with the appraiser prior to completion of the report. The appraised (fair market) value will be offered to the property owner.

The only significant improvements considered for acquisition in this project are located on the Elkhorn Ranch property. Those persons residing on this property at the time of acquisition will be relocated in accordance with Public Law 91-646, and currently it is estimated that this will include four or five families. These families are now tenants, not owners, on the Elkhorn Dairy Ranch.

Acquisitions will be made on a willing seller basis. Condemnation action is not intended to be taken by the State of California. OCZM will acquire no land and does not have condemnation powers.

E. The DEIS Does Not Adequately Describe the Need for Acquisition of the Proposed Parcels, the Need for Uplands, or the Rationale for the Proposed Boundary.

Limited access, in addition to good land stewardship and compatible use of the area's resources by the landowners has kept Elkhorn Slough in relatively good environmental condition. Cooperation of the landowners and Moss Landing Harbor District authorities has permitted educational and scientific use of the slough. However, public acquisition of the lands within the proposed sanctuary boundaries is deemed necessary for the following reasons: (1) to provide ultimate management control within the sanctuary, not only at present, but in years to come when land ownerships and land uses may change to a point of altering the present natural resource values of the area, (2) to ensure a continuum of baseline research without unregulated access, (3) to acquire lands suitable for interpretive and support facilities, and (4) as access sites to meet the goals and objectives of research/educational programs, and the LCP.

The proposed estuarine sanctuary includes 36 individual assessor parcels (31 different ownerships). Of this, acquisition of uplands above the 10' contour is proposed from four ownerships (parcels 1, 2, 7, 14, 15, 18, and 19). Except for parcel 7, these locations are proposed for public access and use areas. Public acquisition of the upland portion of parcel 7 is proposed, since acquisition of the wetlands would render the remaining land unusable for development purposes. The remaining 29 parcels (27 ownerships) include areas only below the 10' contour line. This line was determined in previous scientific studies to be the line below which public acquisition and control was essential to the protection objectives of the sanctuary.

The proposed sanctuary boundary line includes most of the relatively unmodified wetlands, some wetland areas modified by diking, and transitional upland (to the 10 feet contour line). All of this land is on the south and east side of the slough and it is in sufficient acreage to assure a viable ecological unit. As stated above, additional upland area has been included to provide a place for support facilities and access sites.

F. What is the Relationship Between the U.S. Fish and Wildlife Refuge, The Nature Conservancy, and the Estuarine Sanctuary

There is no official relationship between the acquisition plans for the proposed estuarine sanctuary, the acquisition programs of the USF&WS, and The Nature Conservancy. The USF&WS acquisition program is pursuant to the 1973 Rare and Endangered Species Act. The Nature Conservancy is a private, non-profit organization and lands acquired by it are private property. The State of California, through the Wildlife Conservation Board, has integrated its plans to acquire lands for an Ecological Reserve at Elkhorn Slough with plans to acquire Estuarine Sanctuary lands. The Department of Fish and Game has been designated as the "lead agency" to manage and develop the sanctuary proposal. However, if the estuarine sanctuary is established, it has been proposed in the DEIS/FEIS that the Department of Fish and Game coordinate with the U.S. Fish and Wildlife Service to bring all acquired lands under joint management. This will allow for more efficient management and reduce or eliminate confusion over different management policies within Elkhorn Slough. It will also broaden the scope of the educational and scientific goals of the proposed sanctuary.

G. Public Access to the Sanctuary Needs to be Explained.

Some individuals were concerned that access was too restricted, while others thought that increased access would threaten the natural values of the sanctuary. OCZM is also concerned about access, and proposes a cautious approach to increased access. Increased access will be carefully planned and monitored so that the natural qualities, for which Elkhorn Slough is so important will be preserved, and to insure that access to the sanctuary does not affect or interfere with adjacent private property owners. In addition, all sanctuary programs, access, development, and use will have to be consistent with Monterey County's LCP. It is envisioned that the Advisory Committee, working within the LCP process, will play an important role in determining access provisions.

H. Estuarine Sanctuary Status Could Limit Planning Options for Improving or Relocating the Coastal Highway (HWY 1)

Section 4(f) of the U.S. Department of Transportation Act of 1966, PL 89-6709 states, "After August 23, 1968, the Secretary (DOT) shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as

determined by the Federal, State, or local officials having jurisdiction thereof...unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such programs include all possible planning to minimize harm to such park, recreational area, wildlife, and water fowl refuge..."

The intent of this provision is to ensure that various levels of government that have set aside places of natural beauty for preservation or recreation are consulted by the Department of Transportation in planning any project that have impacts on such areas. The existing Highway 1 and its proposed realignments (including freeway status) are located in an area already designated by the State of California as a resource of State significance and the State has already initiated steps to acquire the area as a State Ecological Reserve. In addition, the future boundaries of the National Wildlife Refuge will also include lands within the proposed realignments of Highway 1.

The State of California currently has sufficient authority regarding Highway 1 bridge design, construction, realignment, or other mitigation measures to protect the estuary's natural resources. Estuarine sanctuary status should not impact or impair the various highway proposals. However, if the area is significantly degraded by highway or bridge construction and cannot be used for estuarine research or education, OCZM could request the return of its monies. Estuarine sanctuary status is not intended, or desired, to add additional regulatory authority over and above that of the State of California, or other Federal agencies in regard to the various Highway 1 proposals. Admittedly, estuarine sanctuary status might add "psychological" weight to protecting the Elkhorn Slough area. The State goal of protecting Elkhorn Slough is well documented, and the provisions of PL 89-6709 would have to be followed regardless of estuarine sanctuary establishment.

#### I. The Elkhorn Slough Advisory Committee Does Not Have Representatives From Important User Groups

Concern was especially expressed about the lack of representatives from agriculture, industry, and fishing. OCZM has modified the Advisory Committee to include broad representation by such important users of the Elkhorn Slough area. The Moss Landing Commercial Fisherman's Association, or representative, has been added to the Advisory Committee. In addition, a property owner subcommittee will be proposed and will be comprised of a representative from agricultural, industrial, and residential property owners. The organizations, or individuals to represent each of these property owner groups will be chosen by the Monterey County Board of Supervisors. The subcommittee itself will select a representative to the Advisory Committee.



## FEDERAL AGENCIES

### U.S. Environmental Protection Agency

Office of External Relations (Deanna M. Wieman, 6/14/79)

#### Comment

The Elkhorn Slough DEIS has been classified as Category LO-1, which is defined as "LO - Lack of Objections" meaning that "EPA has no objection to the proposed action as described in the draft environmental impact statement; or suggests only minor changes in the proposed action" and "Category 1 -- Adequate" meaning that "the draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action."

#### Response

Comment accepted.

### U.S. Department of the Interior

Fish and Wildlife Service (Lawrence W. DeBates, 6/22/79)

#### Comments

Figure 3 on page 7 does not adequately depict the Fish and Wildlife Service (FWS) proposed boundary for a refuge. Although the FWS has agreed that the State of California pursue acquisition (in fee) of the five tracts on the south side of Elkhorn to be included within the Sanctuary boundary, the five tracts plus the channel are still included in the FWS proposed boundary. Refers OCZM to the Service Environmental Impact Assessment on Elkhorn Slough, dated October, 1978 (Figure 2, page 4).

#### Response

Comment accepted. The map is not changed since the five tracts are to be included within the proposed sanctuary boundary. If the Sanctuary is not designated, the five tracts will be included in the FWS refuge.

### U.S. Department of Energy

San Francisco Office

(John Crawford, Acting Technical Branch Chief, 6/22/79)

#### Comment

The DEIS acknowledges the presence of PG&E's Moss Landing power plant adjacent to the proposed sanctuary and makes the statements that "uses and activities outside the sanctuary, as well as compatible commercial recreational, and other uses within the sanctuary, must also be examined to minimize adverse effects," and "it will also be of great importance to identify uses outside of the sanctuary that may interfere with the attainment of estuarine sanctuary objectives." The DEIS does not make judgments with respect to the impacts of the power plant upon the sanctuary, so one must assume that such an evaluation will be undertaken only after the sanctuary becomes a fact. The DEIS does not recognize that the power-generating facility, its associated oil storage tanks,

and nearby offshore tanker terminal operation is as an essential part of PG&E's power-producing system, which is of regional significance. Actions of Federal and/or State regulatory agencies on behalf of the Elkhorn Slough sanctuary (after its approval) that would tend to restrict or eliminate power production from the Moss Landing plant might have a detrimental effect on local, State, and National energy interests.

#### Response

We recognize the importance of PG&E including related facilities and estuarine sanctuary status shall not cause the restriction or elimination of power production from this plant. See General Response A also.

#### Comments

We understand that OCZM will provide funds to the State to purchase certain lands for inclusion in the sanctuary and that property of PG&E, designated as parcel 36 in the DEIS, would be acquired. Parcel 36 cannot be located on Figures 1 and 2 of the DEIS and we suggest this be corrected. How essential is parcel 36 to the current and future proposed operations of PG&E at Moss Landing? Was this parcel a part of the lands formally designated by the California Coastal Commission as appropriate for power plant expansion?

#### Response

An improved map is included in the DEIS. The State will negotiate for the purchase of fee simple title, or less than fee, if sufficient protection can be assured. The State does not intend to use condemnation authority on PG&E land.

#### Comments

PG&E has an easement through the proposed sanctuary area for possible installation of transmission lines, but no stand is taken on this issue in the DEIS other than to say that use of the easement by PG&E would most likely require an Environmental Impact Review under NEPA. Previous comments about the regional significance of the PG&E facility also apply to the transmission corridor issue and should be given careful consideration in the planning processes. Figures 1 and 2 of the DEIS should include the transmission corridor easement.

#### Response

The sanctuary will not affect the status of the easement for transmission lines. Sanctuary status will not cause an environmental impact review. California law does require a review if appropriate State agencies feel it necessary. OCZM, or sanctuary status, will not affect this review, or alternative if eventually proposed. The review of any such proposals is the proper function of local and state regulatory agencies.

### Comments

On page 32 it is stated that the influx of visitors to the slough will increase markedly if the slough becomes an official sanctuary. Will the concept of a sanctuary (i.e. by definition a place of refuge or asylum, a reserved area in which animals or birds are protected from hunting or other molestation) suffer from over penetration by those persons who wish to protect it the most?

### Response

See General Response G.

### U.S. Department of the Army

San Francisco District, Corps of Engineers

(James C. Wolfe, Acting Chief, Engineering Division, 6/22/79)

### Comments

A management plan to resolve differences between the objectives of the proposed sanctuary and adjacent land use is discussed on page 11. A detailed investigation of existing land use adjacent to the proposed boundaries should be made to identify potential conflicts. If unresolvable conflicts are found, perhaps the boundaries of the proposed sanctuary should be modified to include a "buffer zone." Cumulative effects of land use adjacent to the sanctuary should be discussed in the Statement and any restricted uses should be described in more detail.

### Response

See General Response A.

### Comments

The intent of the second paragraph on page 17, regarding a "cooperative agreement" with the Moss Landing Harbor District, is not clear. One of the main purposes of the proposed sanctuary is to protect the integrity of the marine life and water quality in the Elkhorn Slough. Would omission of the subject waters be detrimental to the estuarine sanctuary?

### Response

The purpose of the estuarine sanctuary is to provide an outdoor laboratory in which research and education take place under the protection of State and Federal law. The water area will be used by researchers and educators under agreement with the Moss Landing Harbor District, recognizing other such uses as mariculture, fishing, hunting, birdwatching, and the like.

#### Comment

The objectives and geographical areas of the National Wildlife Refuge and Estuarine Sanctuary in Elkhorn Slough appear to be interrelated and perhaps the needs of the area could be met through one of these designations. The management plan for the proposed Sanctuary should be closely coordinated with or include the Refuge. The need for the Sanctuary should be described.

#### Response

See General Responses A, E, and F.

#### Comment

The significant resources in the Elkhorn Slough estuary should be summarized, based on the "Preacquisition Planning Study: Elkhorn Slough" (June 1968).

#### Response

The "Study" was actually completed in February 1979. We have summarized what we consider to be adequate for the decisionmaking process. For further information, see the "Study," itself.

#### Comment

A data management and retrieval system should be developed in order to disseminate the information gained from research in the Slough to the public and other agencies and funding for this system should be included in this proposal.

#### Response

Such a system will be one of the priorities of the Advisory Committee.

#### Comment

Alternatives to the proposed action should be described in more detail and a cost comparison of the different alternatives would be appropriate.

#### Response

Many detailed changes and additions have been made to the FEIS. Cost comparisons of different levels of protection of natural resources are extremely difficult to perform and are not appropriate for an estuarine sanctuary.

Comment

The views and comments from the public and other agencies should be included as part of the basis for selection of the proposed alternative.

Response

This is the goal of the NEPA process. The DEIS, public hearing, and FEIS are for the purpose of soliciting comments and views from the public and other government agencies.

Comment

Does the California Department of Fish and Game have the personnel and funding to adequately manage the proposed Sanctuary?

Response

Yes, and OCZM will provide up to \$50,000 annually for 3 years to assist in the initial management of the sanctuary.

Comment

The boundaries of the proposed Sanctuary in Figure 2 need to be more clearly defined.

Response

See General Response C.

U.S. Department of the Interior  
(Larry E. Meierotto, Assistant Secretary, 7/10/79)

Comment

The designation of the Sanctuary is important because it preserves Elkhorn Slough as one of the significant remaining examples of a salt marsh habitat, as an important habitat for two endangered bird species and one endangered amphibian species, as a feeding and nesting habitat for resident and migratory shorebirds and waterfowl, and for the positive long-term benefits to the environment.

Response

Comment accepted.

Comment

There is a high coliform bacteria count and high thermal loading from the power plants, both of which have occurred due to development within the Elkhorn watershed. Establishment of the Sanctuary, the proposed Fish and Wildlife Refuge, and a proposed Monterey Bay Marine Sanctuary

will have a positive impact on water quality and should provide impetus for and assist State and local regulatory agencies in cleaning up deteriorated water quality throughout the watershed. Clean water will benefit commercial fishing, mariculture, and shellfishing.

#### Response

Comment accepted, although water quality changes shall not be required by sanctuary establishment. This is the proper function of other State and Federal agencies.

#### Comment

The proposed sanctuary and the proposed wildlife refuge do not include the entire ecological unit. An example of the consequence of conflicting land use is seen in an area surrounding another Fish and Wildlife Refuge. Section H, Land and Resource Use of the DEIS, should be expanded to include future land use for adjacent areas.

#### Response

See general response A. It would be desirable that future land use strategies for adjacent areas be developed and Monterey County, under its LCP, is currently doing so.

#### Comment

Purchase of sanctuary land will remove some lands from agriculture. The EIS should identify the number of acres of agricultural land that will be acquired, the changes in land use now contemplated, and the estimated loss to agricultural production.

#### Response

It has been roughly estimated that less than 100 acres of agricultural land will be acquired. Approximately 1/2 of the proposed acquisition consists of wetlands. The balance, other than agricultural, is marginal grazing lands mostly located on the former Elkhorn Dairy Ranch.

#### Comment

Management of the estuarine sanctuary waters by an independent body such as the Moss Landing Harbor District and the sanctuary land by a second authority is unwieldy if comprehensive control is the objective. Explain the proposed management concept.

#### Response

Comprehensive use, rather than control, will be obtained since the Moss Landing Harbor District is a member of the sanctuary advisory committee and cooperative agreements will be arranged. The USF&WS is currently exploring a lease of the water area for fish and wildlife purposes. These mechanisms, in addition to existing State and Federal Law, will assure the protection of the estuarine waters within Elkhorn Slough.

#### Comment

Incorporation of the Heritage Conservation and Recreation Service as an Elkhorn Slough interest group is important. HCRS will shortly be responsible for evaluating and recommending the possible designation of Elkhorn Slough as a National Natural Landmark. Their objective is both to recognize and encourage the preservation of sites illustrating the geological and ecological character of our country and to enhance their educational and scientific value.

#### Response

OCZM recognizes the outstanding work of HCRS in the field of historic preservation, and encourages its involvement in identifying and protecting sites for their geological and ecological character. HCRS would be an ideal member of the research or education subcommittee, as appropriate.

#### Comment

The quality of Figures 1, 2, and 3 (maps of the location and proposed boundaries of the sanctuary) should be improved.

#### Response

See General Response C.

U. S. Department of Housing and Urban Development  
(Trudy P. McFall, Acting Director, 6/7/79)

#### Comment

The DEIS is consistent with HUD 701 and other program requirements, insofar as they are relevant to associated land use and other plans and to the impact of Federal programs supported by HUD. HUD recognizes the significance and importance of the sanctuary area and supports the action of OCZM in establishing a wildlife and aquatic enclave.

#### Response

Comment accepted.

## STATE AND LOCAL GOVERNMENT

### California Department of Transportation

(M.W. Beckstead, Deputy District Director,  
Project Development and Transportation Planning, 5/24/79)

#### Comment

On page 26, the reference made to removing from CALTRAN'S long range construction program the proposal to relocate State Highway 1 is not correct. The proposal has been removed from the short range construction program extending through the 1983/84 fiscal year, but it is retained in the inventory of projects for long range construction needs and is a candidate to be considered in making up the short range construction program, which is updated yearly. State Highway Route 1 is a route of statewide significance and the proposed construction would close an existing transportation gap. The project is included in the Regional Transportation Plan prepared by Monterey County and the Regional Transportation Improvement Plan prepared by AMBAG, the latter of which becomes a building block for the State Transportation Improvement Plan. Preliminary design work has been prepared and is flexible in construction features but not in location. A full environmental study would be necessary before any proposal for construction could be made and before any kind of evaluation of relative impacts of various alternatives could be made. A "no-build" alternative may have a severe negative impacts both economically and environmentally. The DEIS has not given adequate consideration to the consequences of an action that might preclude any reasonable solution to a serious transportation problem.

#### Response

Factual changes have been made in the FEIS. See General Response H for a discussion of Highway 1.

### Santa Cruz County Farm Bureau

(Charles Barr, Jr., public hearing comments - 6/20/79)

#### Comment

Several aspects of the DEIS warrant further discussion and close scrutiny by the agencies involved. All 70 square miles of Elkhorn watershed is important to the resources involved and failure to acquire and control this essential habitat of the slough would be inexcusable and would defeat the entire purpose of the sanctuary program.

#### Response

We agree that Elkhorn Slough watershed is important and it has been recognized in the Coastal Act of 1976. It is presently the responsibility of Monterey County under the LCP to examine land use in the North County area.



Comment

The reasons precluding further purchase of land, (i.e., financial constraint) in the DEIS as given are unacceptable and the response to this concern in the DEIS is inadequate.

Response

The cost of 70 square miles at \$2000/acre is \$90,000,000. Unfortunately, all public land acquisition budgets are limited and are themselves subject to competing demands so, it is impossible to buy all lands that might be desired.

Comment

When will activities outside the sanctuary, which may have an adverse impact, be examined in order to minimize their effect?

Response

See General Response A for dates.

Comment

It is not enough to expect the Local Coastal Planning Process to develop a land use plan and a process for resolving use conflict outside the sanctuary.

Response

California law requires the LCP process. The Sanctuary Advisory Committee will assist in providing information, as needed, to Monterey County.

Comment

The issue of public access deserves further study and concrete planning.

Response

See General Response G.

County of Santa Cruz

(Gary A. Patton, Supervisor/ Third District, 6/20/79)

Comment

The Elkhorn Slough Estuarine Sanctuary designation is very important. The biological productivity of Elkhorn Slough is seriously perilled, and it must be protected.

Response

Comment accepted.

California Coastal Commission  
(Edward Y. Brown and Micheal L. Fisher, 6/8/79)

Comment

Strongly concur with the findings regarding environmental consequences, negative and positive impacts as listed on summary page iv of the DEIS. We respect the economic consequences, and realize that a sanctuary of a more inclusive configuration would be economically infeasible. This conclusion should perhaps be restated to say that the proposal represents an attempt to secure the optimum configuration under the given budget, and does not necessarily represent the optimum configuration in the abstract. A \$12,000 impact on the local tax base is given, but there are no comparable positive economic benefits presented. These might include: long-range protection of commercial fishing industry through preservation of estuarine nursery areas; federal assistance to impacted areas which might off-set tax base impacts; proximity of a National Wildlife Refuge/Estuarine Sanctuary to metropolitan San Francisco/San Jose may provide a strong economic stimulus to visit the area and boost and diversify the local economy through visitor-generated revenue.

Response

Comment accepted. It is difficult to quantify these benefits but the FEIS was changed to include such benefits.

Comment

The basic ecological unit of the sanctuary must comprise as a minimum all contiguous saltmarsh wetlands in a natural condition. The proposed boundaries include this plus some restorable wetland areas and some immediate foreslope areas, but neglects the slopes and marshlands immediately east of the slough, the Azevedo ranch wetlands on the easterly side of the railroad tracks, a few steeper slopes upland from Bennett Slough, and all marsh areas and eelgrass beds seaward of Highway 1. The intervening upland peninsulas and marsh shorelands with live oak forests, which are particularly suitable for wildlife habitat, due to diversity, substantial edge effect, and a large number of suitable nesting/resting sites are only meagerly represented. Should substantial funds become available, the sanctuary configuration, particularly the "peninsula" area should be reevaluated.

Response

Comment accepted. We feel the funds currently available are being used to best advantage to assure a viable ecological unit. If additional funds become available in the future and if the lands you mentioned can be acquired, CF&G or the USF&WS might desire to reevaluate this area.

Comment

Land acquisition alone can not assure preservation of the slough's wetlands; careful management of activities in the sanctuary and development on adjacent water and lands will be the key. Such protection

is mandated by the California Coastal Act of 1976, which comprises California's coastal management program and with which the sanctuary proposal appears wholly consistant. Close coordination of management between sanctuary managers, the Moss Landing Harbor District, and Monterey County will be essential, a need addressed through proposal of a Sanctuary Advisory Committee. With the sanctuary as a focus of local planning and intergovernmental coordination efforts, the preparation of Monterey County's Local Coastal Program will be facilitated.

Response

Comment accepted.

Comment

The DEIS effectively documents the facts and clearly supports the selected alternative. OCZM and CF&G merit recognition for a job well done. Upon implementation, the Elkhorn Slough Estuarine Sanctuary will be an important component of the National estuarine sanctuary network, provide outstanding opportunities for scientific research and educational uses, and generate information needed for coastal resource management decisions in the Californian biogeographic region.

Response

Comment accepted.

Association of Monterey Bay Area Governments (AMBAG)  
(Warren C. Freeman, Senior Planner, 6/12/79 and 6/15/79)  
(Wilber E. Smith, Executive Director, 6/15/79)

Comment

Describe the impact of the proposed Estuarine Sanctuary and Wildlife Refuge on the planned Highway 1 route, which would cross both of these lands. Describe the impact of the new proposed Highway 1 route upon the Sanctuary and Wildlife Refuge.

Reponse

See General Response H for impact from proposed estuarine sanctuary on Highway 1. Please contact the U.S. Fish and Wildlife Service for the potential impacts on the Wildlife Refuge.

Comment

What is the total estimated cost and mechanisms to be used to relocate as many as 673 persons from the proposed Estuarine Sanctuary and Wildlife Refuge lands?

### Response

AMBAG called OCZM regarding the incorrect number of individuals to be relocated. The estuarine sanctuary will displace no permanent residents, but possibly as many as five tenant families. These individuals will be compensated for relocation expenses according to Federal Law.

### Comment

Describe allocation and source of funds provided to the proposed Elkhorn Slough Estuarine Sanctuary Advisory Committee for operations and maintenance of the Sanctuary.

### Response

Operation and maintenance of the Estuarine Sanctuary will be by the California Department of Fish and Game. OCZM can provide \$50,000/year for 3 years and CF&G will allocate funds during their budgeting process. CF&G currently has an office in Monterey that would service the proposed sanctuary.

### Comment

Describe provisions to be made to make up for the \$12,000 loss to the county of real estate tax revenue.

### Response

Examples were given in the DEIS regarding economic benefits to the local community from sanctuary establishment. Direct benefits of sanctuary establishment, though very real, are hard to quantify over time, but they are expected to equal the revenue loss.

### Comment

Describe the impact of the proposed Highway 1 route upon the fishing and shell fishing industry.

### Response

It is the responsibility of CALTRANS to address these impacts at the time they propose a specific project.

Monterey County Planning Department  
(E. W. DeMars, Director of Planning, 7/10/79)

### Comment

The findings of the Elkhorn Slough DEIS are correct and issues are adequately addressed. Needed are clarification of the impact of the sanctuary on adjacent lands and coordination of a management plan.

Restriction of land uses that "may interfere with attainment of sanctuary objectives" could have significant impact on landowners adjacent to the sanctuary, and, as such it is suggested that you show reasonable application. Existing laws require certain restrictions of development adjacent to or in valuable habitat areas, and additional land use restrictions that would be appropriate due to the existence of an estuarine sanctuary, and the impacts of these restrictions should be carefully documented, clarified, and justified. Land use and development impacts within the Moss Landing Harbor area that are incompatible with an estuarine sanctuary need to be specified. The responsibilities of the County to implement land use controls in the Local Coastal Program necessitated by an estuarine sanctuary should be clearly designated.

#### Response

See General Response A. OCZM clearly recognizes the responsibilities of Monterey County for planning under the LCP. No additional controls shall be required as a result of establishment of an estuarine sanctuary, including the Moss Landing Harbor area.

#### Comment

The negative economic impacts of the sanctuary on the property tax base were presented in the DEIS, but the positive impacts on local commerce were not evaluated. A more complete economic analysis would be useful to ascertain the range of economic impacts caused by the creation of an estuarine sanctuary.

#### Response

We realize that there are many economic benefits of the preservation of fish and wildlife habitat, but they are difficult to document precisely because of the assumptions that would have to be made. We emphasize and documented the negative impacts more in the DEIS because concern was raised in this area during preparation of the document. It is recommended that a study be planned that will actually document, over time, the positive and negative impacts of estuarine sanctuary establishment.

#### Comment

There is a need for a comprehensive management program in order to implement a land use plan that provides adequate protection for the Elkhorn Slough environment and facilitates the realization of sanctuary goals. It will be necessary to immediately organize the appropriate agencies to provide input into the Local Coastal Program to be completed before January 1981. The management plan should make clear provisions coordinating the sanctuary advisory committee's participation in the Local Coastal Program.

### Response

See General Response A. Monterey County has the lead for organizing the appropriate agencies for input into their LCP. A statement has been added explaining the advisory committee duties regarding coordination in the LCP process.

### Monterey County Farm Bureau

(Kenneth Martin, Director, Public Hearing Statement, 6/20/79)

(Manuel Gularte, President, 7/2/79)

### Comment

The mechanism used to notify the public about the hearing on the proposed Elkhorn Slough Estuarine Sanctuary was inadequate and the first hearing was held in Monterey, not in Castroville, as reported in the DEIS.

### Response

See General Response B.

### Comment

The Elkhorn Slough Advisory Committee does not have representatives from agriculture, industry, or fishing, the most important users of the area.

### Response

See General Response I.

### Comment

The Bureau objects to taking private lands out of agriculture and off the tax rolls, especially without just compensation.

### Response

No lands will be purchaed without just compensation and it is estimated that less than 100 acres within the proposed boundaries are farmed.

### Comment

The Highway 1 project across Elkhorn Slough will be stopped and the sanctuary will interfere with transportation for the public and for agriculture.

Response

See General Response H.

Comment

Scientific research and study presently go on without much hindrance, as shown by all the material in the environmental report.

Response

See General Response E.

Comment

The project should be delayed until agriculture, industry, and the fishing industry provide their input.

Response

OCZM has received and reviewed significant input from these interests during preparation of the FEIS. Also see General Response I.

Comment

There are sufficient safeguards to protect the slough.

Response

OCZM and the State feel that land acquisition is required within certain parts of the Slough.

Comment

The Monterey County Farm Bureau opposes the whole Elkhorn Slough Estuarine Sanctuary project.

Response

OCZM appreciates the frank position taken by the Farm Bureau and will take it into account prior to making any final determination.

Central Coast Regional Commission  
(Eleanor Taylor, Commissioner, 6/20/79)

Comment

The DEIS is excellent, well organized and easy to read. The sections on possible conflict of uses could be strengthened by more detailed examination of potential industrial development. The presense of Kaiser Industries and PG&E indicate an ongoing industrial activity, and changes in operation or expansion of these two facilities may exert sizeable impacts on an estuarine environment, even though present use is compatible.

Response

Comment accepted. Stronger language was added to the FEIS on the subject of conflict of uses regarding the role of the LCP in Monterey County.

Comment

A potential impact on the slough is oil and gas development on the outer continental shelf. The Association of Monterey Bay Area Governments has issued a preliminary discussion paper on a "Scenario of Exploration, Development, and Production" for OCS development and identified Moss Landing as a potential location for a permanent onshore service base. The EIS should identify potential problems arising from future possible OCS oil and gas development.

Response

We believe the FEIS statement on oil and gas development is sufficient. The sanctuary cannot control activities outside the sanctuary boundaries as outlined in General Response A.

The Resources Agency of California  
(L. Frank Goodson, Assistant Secretary for Resources, 6/20/79)

Comment

The State of California has reviewed the DEIS, fulfilling requirements under Part II of Office of Management and Budget Circular A-95 and the National Environmental Policy Act of 1969. The review was coordinated with the Departments of Conservation, Boating and Waterways, Fish and Game, Parks and Recreation, Water Resources, Food and Agriculture, and Health, the Air Resources, Solid Waste Management, and State Water Resources Control Boards, and the State Lands Commission. The State Lands Commission states that on page 25 of the EIS the fourth sentence should read, "The State's ownership extends to the ordinary high water mark."

Response

Comment accepted. This statement was included in the FEIS.



Monterey Regional County Sanitation District  
Robert S. Jaques, Agency Engineer, 5/22/79

Comment describes operations treatment and efficient locations as well as future waste water management programs for Monterey County and, in particular, the Castroville area. Flows discharged from the existing Castroville wastewater treatment plant are reported to be of acceptable effluent quality and have not been linked to any water quality problems. They enter Tembladero Slough, a tributary to Moss Landing Harbor and an area proposed to be designated as an estuarine sanctuary. This plant is being converted into a pilot scale facility for the purpose of conducting a five year agricultural irrigation demonstration project. The Castroville treatment plant will continue operations at least through the 5 year study period and the treated effluent will continue to be discharged in the present manner to Tembladero Slough when necessary. Noted reference in the DEIS that more restrictive water quality criteria may be applied to the sanctuary area and expressed concern that more restriction criteria may hinder plant operations. While designating an area as an area of special significance often does not in and of itself create additional

rules and regulations that affect the District and Agency. The designation frequently translates into additional criteria developed by the current regulatory agencies. Both the Moss Landing County Sanitation District and the Castroville County Sanitation District were not included on the DEIS mailing list.

#### Response

The estuarine sanctuary shall not cause additional regulations to be applied to the Monterey Regional County Sanitation District. We support the demonstration project described. Omitting the sanitation districts from the DEIS distribution was an oversight and we apologize for any inconvenience this may have caused.

Henry Case

California Department of Transportation  
(Public Hearing Comments, 6/20/79)

Comment

Why was sanctuary acquisition fragmented, documented, and funded by two separate agencies (referring to the U.S. Fish and Wildlife Service EIS for acquiring the National Wildlife Refuge). Why do the areas covered in the two documents not agree? Between the two proposals, CALTRANS has a potential problem. If the area acquired contacts the existing highway line, it would be more difficult to make even minor improvements to that facility. Minor improvements and replacement of the existing bridge is planned. Some additional land will be needed to replace the bridge and a sanctuary proposal will delay this a minimum of two years, and might prohibit it being done altogether.

Response

See General Response F and H.

Comment

Corrects DEIS statement that realignment of Highway 1 has been dropped from the plan. Notes that it has not been proposed for funding in the short range plan but is still in the long range plan and is on our list of candidates to be funded when and if funds become available. Notes that this is an important link in a route of statewide significance, and is consistent with Department policy. Notes that the Coastal Act is not absolute in prohibiting all such construction. States that the proposed link provides the shortest route across the slough and that eventually something more than the existing highway is going to have to be done. States that the Department is taking no position on whether this should be a sanctuary or not and that the Department would be disturbed if an action were taken that would, by law, preclude the study of possible solution to this transportation problem.

Response

See General Response A. OCZM encourages the examination of all alternatives and cannot, by law, preclude alternatives to the solution of transportation problems.

Fish and Game Advisory Commission, Santa Cruz

R.S. Montoya, (Public Hearing Statement, 6/20/79)

Comment

The Fish and Game Advisory Commission has its own problems, laws, and agencies and does not need interference.

Response

No interference by OCZM is intended; also see General Response A.

California State University  
(Robert A. Kennedy, Vice President, 6/11/79)

This area is under heavy pressure from all sides and needs protection. Elkhorn Slough is an important resource and laboratory. The money and the opportunity to establish the sanctuary are available now. They may never be available again.

Response

Comment accepted.

California State University at Fresno  
Brandt Kehoe, Dean--School of Natural Resources (Public Hearing Statement, 6/20/79)

Comment

Supports preservation status. Elkhorn Slough serves six campuses in the State college and university system. As one of a vanishing number of major estuaries and surrounding wetlands, Elkhorn Slough is of significance to the Nation and the world. It is important to understand how the species in the estuary evolved and developed and how the chain of life came about. To lose this resource is to lose an extremely vital resource for all of mankind.

Response

Comment accepted.

California State University - Fresno  
Graduate Studies and Research (Vivian A. Vidoli, Dean, 6/13/79)

Comment

The establishment of the Elkhorn Slough Estuarine Sanctuary is important. The Slough is of inestimable importance to the teaching/research mission at Moss Landing Marine Laboratories.

Response

Comment accepted.

California State University, Hayward  
(Edward B. Lyke, 6/4/79)

Comment

Supports the inclusion of Elkhorn Slough in the National Estuarine Sanctuary Program, noting that this unique area of estuarine habitats has proven to be an extremely valuable natural resource and of considerable interest to the scientist and layman for a number of years. Elkhorn Slough as one of the few relatively "untouched" estuaries along the California coast and has served as a valuable habitat for faculty from all levels of education and should be allowed to continue to serve them.

Response

Comment accepted.

California State University, Hayward  
(Detlef A. Warnke, Professor of Geological Science, 6/1/79)

Comment

Estuarine sanctuary status for Elkhorn Slough is imperative for the following reasons: the passage of Proposition 13 suggests that no other estuary will be accorded this status; estuaries are the most "important" segment of the world's oceans because of the intense interaction between man and the marine environment in this area. Estuaries, as little modified as possible, should be available for baseline study, and closely linked to instructional/research institutions. Elkhorn Slough fulfills these conditions as an invaluable study site and training area to Moss Landing Marine Laboratories of the California State University and Colleges system. Development of the slough would be a staggering blow to educational programs whereas sanctuary status would greatly enhance the value of the slough.

Response

Comment accepted.

Monterey Peninsula College  
(Winona Trason, 6/14/79)

Comment

Take all steps to ensure Elkhorn Slough's protection as a sanctuary. Ever since the college began in 1949, biology classes have visited the slough several times a year. Thousands of students have visited the area and speak of it as a highlight of their time at MPC.

Response

Comment accepted.

San Francisco State University School of Science  
(James C. Kelley, Dean, 6/18/79)

Comment

Establishment of an estuarine sanctuary at Elkhorn Slough is important. The slough is significant as a wildlife habitat and as a subject for basic research. There is a long record of research projects, making the slough extremely important, especially in its natural state. There are few opportunities left to study long term climatic changes. If preserved, the slough may provide sufficiently long and continuous data sets which may help predict the effects of catastrophic events. No major catastrophic events have occurred on the slough, which makes it doubly important to preserve it.

Response

Comment accepted.

San Francisco State University  
(Dr. Jon Galehouse, Professor of Geology, 6/4/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is probably the best area in California for estuarine teaching and research. Elkhorn Slough must be preserved to foster continued cooperative estuarine environmental studies programs.

Response

Comment accepted.

San Francisco State University  
(Dr. Raymond Pestiong, Professor of Geology, 6/20/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is important. Natural, unmodified estuaries play an important role in our ecosystem. Few environments such as the Slough exist in California and it is essential to preserve those left to better understand the operation of these systems. Estuaries are complex systems, reflecting the interaction of physical and biological elements in a constantly changing environment. Elkhorn Slough represents such a system in a natural state.

Response

Comment accepted.

San Jose' State University

(Glen E. Guttormsen, Director of Business Affairs, 6/18/79)

Comment

Awareness of the importance of wetlands and the need to preserve better areas as sanctuaries for teaching and research is important. The Moss Landing Marine Laboratories' graduates usually go into advance studies or occupations in marine science. Elkhorn Slough is a rare area and unique laboratory that must be protected as an estuarine sanctuary.

Response

Comment accepted.

San Jose' State University

(L.H. Lange, Dean School of Science, 6/5/79)

Comment

Supports the nomination of Elkhorn Slough as an estuarine sanctuary, noting its importance to the School of Science and to the Moss Landing Marine Laboratories. Instructional and scientific opportunities should not be passed by. The people of California can regard designation of the sanctuary as unique and important to the State and to the students for whom San Jose' State University is responsible.

Response

Comment accepted.

San Jose State University

(Howard S. Shellhammer, Professor, 6/14/79)

Comment

Supports Elkhorn Slough as an estuarine sanctuary because it is an invaluable resource. It is used by a large number of birds, including the endangered clapper rail and brown pelican. Numerous rare and potentially endangered invertebrates are found at the slough. Many fish apparently utilize the slough in their reproductive cycle and many species caught in Monterey Bay are represented by juveniles in the slough.

Response

Comment accepted.

San Jose State University

(Ellen C. Weaver, Interim Executive V. P., 6/18/79)

Comment

Endorses the Elkhorn Slough Estuarine Sanctuary. Presently serves as a Professor of Biology on the Executive Committee for Sea Grant of the Institute of Marine Resources, and on the MLML Advisory Board. Indicates that Elkhorn Slough offers support to great number of flora and fauna. Since the slough is adjacent to MLML, it will be a magnificent teaching area.

Response

Comment accepted.

San Jose' State University

(John G. Weihaupt, 6/4/79)

Comment

The nearness of Moss Landing Marine Laboratories to Elkhorn Slough is of special importance. Every consideration should be given to the establishment of this estuarine sanctuary.

Response

Comment accepted.

San Jose University

(Joseph H. Young, Chairman, Dept. of Biological Sciences, Public Hearing Statement, 6/20/79)

Comment

Tidal mudflats, such as in Elkhorn Slough, are a rare and valuable instructional resource for the teaching of biology. Mudflat organisms display adaptations that are unique to a unique habitat, and are rare on the Pacific coast.

Response

Comment accepted.

Comment

The following institutions of higher learning in the central California Coastal region send numbers of students to Elkhorn Slough:

Stanford University and Hopkins Marine Station  
Moss Landing Marine Laboratories, California University and College  
Hartnell College  
San Jose State University, San Jose  
Fresno State University, Fresno  
City College of San Jose, San Jose  
West Valley College, San Jose

DeAnza College, Cupertino  
Foothill College, Los Altos

Response

Comment accepted.

Comment

The sanctuary concept for Elkhorn Slough will protect it from further damage due to commercial exploitation. Sensible restrictions on human activities in the slough may permit the reestablishment of uninterrupted food chains that will benefit the development of the larval fishes that live in the slough.

Response

Comment accepted, although any restrictions outside the proposed boundaries will not be caused by sanctuary establishment.

Stanford University - The Hopkins Marine Station  
(Colin S. Pittendrigh, Harold A. Miller Professor of Biology and  
Director, 6/19/79)

Comment

The Elkhorn Slough Estuarine Sanctuary designation is important. The Hopkins Marine Station in the Monterey Bay area has made abundant use of the slough in its teaching and research programs since 1920. The slough is the most important example of an estuarine environment within Monterey Bay and its availability has enhanced marine science programs at many educational institutions. The Hopkins Marine Station's interests in the slough lie primarily in its remarkably diverse, and in several cases unique, marine invertebrate populations. Significant areas continue to be available for long term studies and the National Estuarine Sanctuary Program is clearly adequate for providing permanent protection, which is presently lacking.

Response

Comment accepted.



University of California, Berkley  
(John Daves, Research Zoologist 6/18/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is important. Several descriptions and accompanying arguments supporting preservation of the slough are in the literature. Most of the favored habitats for collecting salt marsh species in California have disappeared under land fill or industrial installations. Species associated with these habitats have also disappeared as is evidenced in statistics on marsh and wetlands reduction. California salt marshes are pitifully limited in extent, subject to high development pressure, and of limited access for educational, research, and recreational purposes. Elkhorn Slough is the finest remaining salt marsh south of San Francisco Bay and it should be set aside for the benefit of future generations.

Response

Comment accepted.

University of California, San Diego  
(Andrew A. Benson, Professor of Biology, 7/5/79)

Comment

The Elkhorn Slough Estuarine Sanctuary will be a priceless asset to the teaching and research programs of California State universities and colleges and to Moss Landing Marine Laboratories. It will serve as a primary study area of the environment essential to the nurture and success of countless species of birds, plants, and animals depend on its stability. An opportunity to utilize this area for demonstration of the nature of California's formerly pristine environment will come only once. OCZM must act to preserve this area.

Response

Comment accepted.

University of California, San Diego  
(Walter Schmitt, Specialist in Oceanography, 6/20/79)

Comment

Acquisition of available lower section of Elkhorn Slough is necessary. The area is particularly useful for research and education. Many marine fisheries species occupy the slough during their life and will benefit from an ecological status quo.

Response

Comment accepted.

University of California, San Diego  
Scripps Institute of Oceanography  
(John S. Oliver, 6/14/79)

Comment

Supports Elkhorn Slough as an estuarine sanctuary. A variety of grammar schools, high schools, colleges, and universities conduct classes at the slough. Personally involved with teaching and research in the slough. The area is a unique and extremely important site for teaching and research.

Response

Comment accepted.

Hartnell College  
(Dr. Marilyn Vassallo, 6/19/79)

Comment

Sanctuary status is necessary for Elkhorn Slough, for it is an invaluable area of learning and must be preserved as a natural resource for future generations. College classes from the Monterey Bay area and throughout California use the slough as a study area.

Response

Comment accepted.

Bernadette Allen

Moss Landing Marine Laboratories  
(Public Hearing Statement, 6/20/79)

Comment

Supports the estuarine sanctuary proposals, noting that as many as 139 species of birds, including 30 species of shorebirds, utilize the slough.

Response

Comment accepted.

William Anderson

(Santa Cruz, Ca., 6/12/79)

Comment

The wildlife habitat represented in the environment of Elkhorn Slough is one of the most important remnants of coastal estuary, salt ponds, and salt and brackish marsh still remaining in California. Thousands of water-oriented birds depend on this stopping place to feed and rest/nest. A relatively little known aspect of Elkhorn Slough is its role as an essential post-breeding area for birds nesting to the South. The Slough is an important gathering place for Heerman's gulls, elegant terns, and brown pelicans. Americans avocets, blacknecked stilts and snowy plovers are permanent residents in the area. Caspian and Forester's terns have established nesting colonies on dikes and islands. A nesting colony of Caspian terns in Elkhorn Slough is the only one in central California except for those in South San Francisco Bay. Elkhorn Slough should be preserved and guarded with infinite care.

Response

Comment accepted.

Animal Protection Institute of America

(Belton P. Mouras, President, 7/10/79)

Comment

The Animal Protection Institute of America strongly supports and appreciates the Elkhorn Slough Estuarine Sanctuary Proposal. Elkhorn Slough is one of California's last truly magnificent wetland areas. It contains diverse and productive fisheries and wildlife values, and is a critical habitat for several endangered species.

Response

Comment accepted.

Mrs. William Arnberg  
(Gilroy, Ca., 7/9/79)

Comment

Concerned about restrictions threatening the commercial fisheries industry and feels that the proposed Elkhorn Slough Estuarine Sanctuary is another political ploy to defeat the fishing industry. There are sufficient laws for protecting the area and the proposed sanctuary will preclude public access and place severe hardships on small, independent owners/operators of fishing vessels.

Response

OCZM totally supports the commercial fisheries industry and NOAA (OCZM and NMFS) has given millions of dollars to support the viability of our country's fishery industry and fish stocks. We feel this comment is without foundation.

Miriam Arozena  
(Aptos, Ca., 7/9/79)

Comment

Expresses support for the establishment of Elkhorn Slough Estuarine Sanctuary. This is a fine area for observing many species of birds on the shore or in the water and it provides a resting and feeding area for flocks of ducks and other migrating birds. An acre of salt marsh is equal in productivity to an acre of Kansas farmland. California's wetlands have been lost to development and Elkhorn Slough should be preserved for its fisheries, recreation, and migratory waterfowl habitat preservation values. The slough itself and its watershed should be included in the sanctuary. Landowners should be given a fair price for their lands.

Response

Comments accepted. Funding constraints prohibit inclusion of the watershed.

Dean Baird  
(San Jose, Ca., 7/7/79)

Comment

An estuarine sanctuary would adversely affect Baird's property at the slough. His use of the property (raising pheasants and growing Christmas trees) does not harm the environment of the slough. There is no need for more government control.

Response

Mr. Baird is not listed as a property owner within the proposed boundaries. His activities will not be affected by establishment of the estuarine sanctuary. See General Response A.

Leta Marie Bakke-Delungio, (7/1/79)

Comment:

The \$3 million should be designated for land acquisition at Elkhorn Slough. The 29 commercial species of fish and many other species of fish important to the food chain that use this are as a nursery as well as various species of endangered birds that use this as a nesting and feeding ground can not vote and put pressure on the government as the property owners and fishermen can.

Response:

Comment accepted.

Sheila Baldridge  
(Pacific Grove, Ca., 7/6/79, Public Meeting Statement, 7/11/79)

Comment

Favors Elkhorn Slough Estuarine Sanctuary. There is a contrast in land use planning between Monterey County, California and Miami, Florida, where, in the latter, unrestrained development has destroyed estuaries and large tracts of mangroves and as a consequence there is loss of nursery areas for fish and shrimp. Why would anyone oppose the estuarine sanctuary proposal? We need the natural riches and diversity of the slough both now and in the future. We can no longer afford the luxury of the "Manifest Destiny" philosophy.

Response

Comment accepted.

Dr. and Mrs. Arthur E. Benoit  
(Pebble Beach, Ca. 6/18/79)

Comment

Establishment of Elkhorn Slough Estuarine Sanctuary is important. This area is an irreplaceable spawning ground for a wide variety of marine life and home for many birds.

Response

Comment accepted.

L.C. Blankenbecler, Sr.  
(Watsonville, Ca., 7/8/79)

Comment

Refers to pp.11 and 12 of the DEIS and requests suspension of action to acquire the Elkhorn Slough for a sanctuary until all property owners and/or lease users of property in the slough area, its adjacent areas, and watershed areas are notified in writing exactly how the proposed acquisition will affect land uses such as residential, agricultural, commercial, density, and zoning, etc.

Response

Written assurances regarding impacts on areas outside the proposed boundaries are contained in General Response A.

Jean Bleick  
(Pebble Beach, Ca., 7/5/79)

Comment

Creation of the Elkhorn Slough Estuarine Sanctuary is a means of assuring protection. The slough is threatened by development in the Moss Landing area, including possible oil spills, OCS development north of Monterey Bay, and additional industrial development.

Response

Comment accepted.

Estelle Blohm  
(Public Hearing Statement, 6/20/79)

Comment

The U.S. Soil Conservation Service is an example of an agency that has been of benefit and assistance to people without dictation or regulation. Long range plans are being made for restrictions on hunting, fishing, and other uses we do not need. Therefore, opposes more government regulations.

Response

See General Response A.

Gary S. Bloom, (undated)

Comment:

As a property owner (five acres) within the watershed, I would like to support the land acquisition and sanctuary plan. The "silent majority" in this case is those who would support the creation of an Elkhorn Slough Sanctuary.

Response:

Comment accepted.

David Bockman  
Sierra Club  
Elkhorn Slough Task Force  
(Public Hearing Statement, 6/20/79)

Comment

Feels that there is no need for the construction of Highway 1 alignment, especially in light of the Coast Act's "two-lane road" requirement. Feels that the DEIS contains the essential facts and should be recommended. Notes that people of Santa Cruz were notified about the hearing in The Sentinel on May 21, 1979.

Response

Comment accepted. See General Response H concerning Highway 1.

Mrs. C. Bonestell  
(Carmel, Ca., 6/18/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is important. This area is a valuable natural resource, breeding ground for fish, and important waterfowl and wildlife refuge. Similar estuarine areas have been destroyed and each loss takes its toll, especially from the fishing industry. Federal funds to match State funds should be approved.

Response

Comment accepted. However, we are not sure about the fishing industry and the destruction of estuaries. Commercial fishermen do not normally fish in small estuaries. Most destruction of estuarine habitats arises from dredging and fill operations.

William Bradley  
(Carmel, Ca. 7/11/79)

Comment

Plans should be made to preserve unique natural areas and the remaining limited habitats of plants and animals for posterity before it is too late. It is impossible to return a developed area back to a natural state. Freshwater sloughs in California are rare and development of Elkhorn Slough would be an atrocity.

Response

Comment accepted. It should be noted, however, that Elkhorn is predominantly brackish.

William Brodsley, (7/11/79)

Comment:

To destroy a unique natural area of this limited kind in California is a true injustice to us all. To destroy the remaining limited aquatic natural habitats of living things, plants and animals, is unheard of. Fresh water sloughs in California are rare. If development starts, there is no turning back.

Response:

Comment accepted.



Philip S. Broughton  
(Pebble Beach, Ca., 7/6/79)

Comment

Attached a description of his understanding of the function of marshes.

Response

Comment and description accepted.

Ralph Buchsbaum  
(Public Hearing Statement, 6/20/79)

Comment

Feels that estuaries all over the world have been destroyed and that the ecological system of Elkhorn Slough should be maintained through sanctuary status. Feels that commercial fishermen often "mine the sea" without regard to protecting areas vital for replenishing the stocks.

Response

Comment accepted.

Ray and Catherine Burgess  
(7/10/79)

Comment

Opposed to the proposed Elkhorn Slough Estuarine Sanctuary. There are enough existing governmental agencies preserving the environment for all the living creatures in the area. Local property owners are preserving the area by limiting access to it, which in turn prevents disturbance and destruction of the area. Property owners in the area affected should have the opportunity to vote on this sanctuary issue. Too many governmental agencies are imposing their views on the electorate without considering the majority views.

Response

See General Responses A and E. Property owners have been given input into the sanctuary issue and changes have been made in the FEIS on the proposed Sanctuary Advisory Committee to permit property owner input. There is no attempt to impose governmental views on anyone. The proposal as outlined in the DEIS and FEIS is straight forward. The acquisition of approximately 1500 acres of land by the California Department of Fish and Game (with 50% funding by OCZM) is for scientific and educational uses. Changes have been made in the FEIS that respond to legitimate concerns.

California Coastal Council

Robert Nix (Public Hearing Statement, 6/22/79)

Comment

The DEIS is vague, incomplete, and it should be rewritten.

Response

The DEIS has been rewritten in response to comments and suggestions.

Comment

The Summary (p.2) reference to adjacent land use should be clarified to identify kinds of impacts anticipated, the kinds of controls or restrictions to be placed on adjoining lands, and what agencies will be controlling or restricting.

Response

See General Response A. The reader is referred to the document itself for a more general statements. The summary is only a broad description.

Comment

The reference on page 4 to removal of property from the tax base is incomplete. There are far more impacts and tax losses that should be documented, such as impacts to Highway 1, "buffer zones" that might be established by other agencies, and impacts on watersheds and existing industries.

Response

See General Responses A and H. We feel we have addressed all relevant impacts resulting from the designation of the sanctuary.

Comment

The references to other sanctuaries (i.e. Coos Bay) does not include information on their negative impacts.

Response

All estuarine sanctuaries are unique and the impacts of each one are examined individually--as is being done in Elkhorn Slough. We are aware of certain negative comments about Coos Bay and feel they are erroneous and do not pertain to the present proposal.

Comment

Funds available might be inadequate and this should be discussed in the DEIS.

### Response

It is felt that funding will be adequate since there are possibilities of "less than fee simple" acquisition. Possibly there will be donations of land, or partial donations. The Department of Fish and Game has the option of completing acquisitions with funds from the 1976 Bond Act Monies, if any remain. The boundaries could also be decreased if funds were not available for complete acquisition.

### Comment

Information on management, including the management board, is incomplete. The Board should include representatives of industry, labor, and agriculture.

### Response

The Advisory Committee has been expanded. See General Response I.

### Comment

There is no information on whether the owners of properties to be acquired have been contacted and are willing to cooperate.

### Response

All property owners have been contacted by the WCB and several are willing to negotiate.

### Comment

The imposition of regulations that would "down zone" the properties to get them into the price range for the sanctuary should not be a part of the plan. This should be discussed.

### Response

Comment accepted. See General Response A.

### Comment

All actions or potential actions of the Coastal Commission related to the sanctuary are directly related to the proposed action to fund the sanctuary. Their effects should be a part of the EIS.

### Response

See General Response A. The Coastal Commission's involvement with the proposed estuarine sanctuary will include being a member of the Advisory Committee.

Comment

Impacts on adjacent land and water uses by regulations of other agencies related to, but not specifically a part of, the sanctuary should be discussed. These may lead to very restrictive land use controls.

Response

See General Response A.

California Marine Parks and Harbor Association  
(Harold Land, Monterey Representative, 7/10/79)

Comment

The DEIS is found to be incomplete, particularly in regard to the interests of local residents, local industry, and Moss Landing Harbor, the social and economic effects of the proposal, and the effects of regulatory measures. When these areas are covered, no factual back-up data is presented.

Response

Every effort was made to take the interests of all concerned individuals, as well as commercial or industrial organizations, into account. The economic effects are addressed and discussed in the FEIS.

Comment

The DEIS does not identify the impact of the proposed sanctuary regulations on the viability of future of Moss Landing Harbor environment. The viability - activity, industry, economics, improved facilities, etc. - of this harbor is an absolute necessity to the social economic well-being of the area and California's commercial fishing industry. The EIS should address factors necessary to the viability of the harbor, such as periodic maintenance dredging, construction of new and renovation of old facilities, improved utilities and pollution control, on-shore support facilities such as boat yards, fueling stations, and fish processing stations, access to shore facilities, etc.

Response

The EIS is intended to describe the impact of the acquisition of lands within the sanctuary's boundaries only. While we agree on the value of the Moss Landing Harbor, this is outside the scope of the FEIS. Most of the issues would seem to come under the LCP being prepared by Monterey County.

Comment

Commercial fishermen and wholesale fish dealers are not represented on the proposed sanctuary advisory committee.

Response

Commercial fishermen have been added to the advisory committee. See General Response I.

Comment

California Marine Parks and Harbors Association feels that the proposed sanctuary is not in the best interests of the commercial fishing industry nor of the present harbor.

Response

We feel the sanctuary will pose no hindrance to the commercial fishing industry; it may, in fact, provide a more productive environment as a nursery for the fishery. Also see General Response A.

Comment

As a private citizen, Land feels that government agencies proposed to each other that a sanctuary be established, without first obtaining direct comment, opinion and consent on the proposal. There does not appear to be any "pressure" for the establishment of a sanctuary as a necessity to scientific progress.

Response

See General Response B. "Pressure" is not a criterion for sanctuary establishment.

California Native Plant Society  
(Betty H. Nybakken, President, 6/20/79)

Comment

The California Native Plant Society completely supports the proposed Elkhorn Slough Estuarine Sanctuary. The slough is the only example in the area of a large salt marsh in which pickleweed Salicornia is dominant. Cord grass Spartina is absent. The slough community is relatively limited in area and is disappearing as salt marshes are drained or altered. The local Native Plant Society uses the slough for field trips. Declaring the slough an estuarine sanctuary will increase its accessibility to interested groups and insure continued survival of the slough community.

Response

Comment accepted.

Van Chambers  
(Santa Cruz, Ca. 6/22/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary receives his support. As a commercial fisherman for a short time, and a neighbor and frequent visitor to the slough, urges protection of fish-growing area and the slough as a whole.

Response

Comment accepted.

Mrs. J. Chandler  
(Watsonville, Ca., 7/3/79)

Comment

Elkhorn Slough should become a sanctuary.

Response

Comment accepted.

Marion E. Chilson, (7/7/79)

Comment:

Elkhorn Slough should be established as an Estuarine Sanctuary. The area between Castroville and Prundale on Highway 156, is being built up with homes. This area is bound to have problems. There are roads that border closer to the slough where homes can be built. There are many acres surrounding the slough itself that are no doubt flooded by high and higher than normal tides. All of this area plus mudflats bared during low tide are inhabited by various kinds of life. Making this area fit for the home of water birds, fish, and sea animals, will make it a boon for the fishermen, nature lovers and outdoors people. The pollution that is there now should be cleaned up. The whole area should be established as a Sanctuary.

Response:

Comment accepted. Please see General Response D for an explanation of why the entire area cannot be included in the Sanctuary.

Coastlands

(Laurie Dillon, Big Sur, Ca., 6/20/79)

Comment

Supports the establishment of the Elkhorn Slough Estuarine Sanctuary. The slough is important to the ecological health of the whole area, including the breeding grounds of the Big Sur Coast.

Response

Comment accepted.

Garth Conlan

(Public Hearing Statement, 6/20/79)

Comment

The people in this area do not need a sanctuary.

Response

This sanctuary, like many others, is designed to meet the broader interests of the region, State, and Nation. Nevertheless, your expression of concern will be considered prior to any decision being made.

Rudd Mary Crawford

(Pebble Beach, Ca., 7/10/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary should be established.

Response

Comment accepted.

Dianne B. Corcia, R.N.  
(6/21/79)

Comment

There is no indication that the various species of fauna in the slough are diminishing.

Response

This is not a major consideration in establishing the proposed estuarine sanctuary.

Comment

The slough is in no danger of becoming extinct. No one wants to dry up the wetlands with dirt, cement, or structures.

Response

Comment accepted.

Comment

Industry, farming, and people are not hurting the slough.

Response

Comment generally accepted; however all of the above users do have impacts on the Slough--some positively, some negatively.

Comment

No one in the area seems to be threatened by the slough's wildlife.

Response

Comment accepted.

Comment

The fishermen do not seem to be suffering from lack of fish to be caught and sold. There seems to be no economic hardship on them at present.

Response

Comment accepted. The estuarine sanctuary should be a positive benefit for the fishermen.

Comment

None of the residents have said that they are willing to sell their property.



### Response

This is not correct. Several have and some are included within this Comment/Response Section. See General Response 0.

### Comment

No one has suggested that the Marine Lab is not a needed facility at Moss Landing. There are experts there who have the training and facilities to represent the wildlife of the slough.

### Response

Comment accepted.

### Comment

Why is there a need for an estuarine sanctuary? Fishermen, property owners, and industry will be losers if the sanctuary is established.

### Response

Fishermen, property owners, and industry will not be losers. It has been OCZM's experience that preserved lands in a community are perceived as an asset; areas such as parks, wildlife refuges, and estuarine sanctuaries are positive community assets.

Cindy P. Costa  
(Castroville, Ca.)

### Comment

Sponsored a petition objecting to the proposed Elkhorn Slough Estuarine Sanctuary. The petition claims that, while the purpose of the sanctuary is "to provide a living laboratory for research and educational enhancement of the natural resource values...", the program provides avenues of control and regulations that could adversely affect landowners, fishermen, business people, industry, and commercial interests. The undersigners agree to a belief that local authorities and the present rules and regulations are quite capable of enhancing and protecting Elkhorn Slough, as they have proven in the past. 2237 signatures were obtained.

### Response

OCZM accepts the petition and recognizes that large effort must have gone into gathering the large number of signatures. Because of this petition and comments received on the DEIS, changes have been made in the FEIS and in the comment section to address the comments that have been made. These changes have been additional explanations of the estuarine sanctuary proposal, clarification of what was contained in the DEIS, or changes to the DEIS. We feel that the clarifications provided and changes made, especially General Responses A and E, address the points raised in the petition.

Cindy Costa

(Public Hearing Statement, 6/20/79,  
Public Meeting Statements, 6/22/79, 7/10/79)

Comment

Speaking for David Miller, President of Monterey Salt Co. The hearing was held without due notice. He wishes to be added to the mailing list.

Response

See General Response B. Also note that the land owned by Monterey Salt is not included within the proposed boundaries.

Comment

The use of Resource Protection Zones (RPZ's) to designate the sanctuary is dangerous for property owners.

Response

See General Response A.

Comment

The Sierra Club would not buy her land, nor would the the Nature Conservancy, the Parks and Recreation Department, or the Fish and Game Department. Now, it is going to be taken at a rate that is confiscation on today's land market.

Response

The Federal procedures for acquiring land assure that people's lands will not be confiscated and a fair market value will be established. We realize that people's expectations of the value of their land may differ from the rates established by the appraisers. But these rates are established in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies published in the Federal Register, September 22, 1976, Volume 41, Number 185, Section 916.22 (d), which say "Establish, prior to initiation of negotiations, an amount which is believed to be just compensation for the real property and make a prompt offer to acquire the property for the full amount so established."

Comment

Designating the slough as a sanctuary means it will be invaded by thousands of students from several colleges, high schools, and special interest groups.

Response

See General Response G.

Comment

A sanctuary is a "quiet place". Elkhorn Slough will not be quiet when a lot of people are attracted to the sanctuary. The agencies involved

should be honest with people and tell them that having a sanctuary will mean taking their land at less than Fair Market Value.

Response

See General Responses D and G.

Tiny DeRay  
(7/7/79)

Comment

Regional management is needed for Elkhorn Slough. The slough is priceless. Preservation of Elkhorn Slough is vital to the ecosystem.

Response

Comment accepted.

Douglas & Janet Despard  
(Carmel, Ca., 7/5/79)

Comment

Strongly support protection of Elkhorn Slough in Monterey County.

Response

Comment accepted.

Bill Doyle  
(Public Hearing Statement, 6/20/79)

Comment

Served on a committee to nominate estuarine sanctuaries and is fully supportive of Elkhorn Slough. Emphasizes the importance to California of having a place such as Elkhorn Slough for long term study where human activities will be managed. There is a first class marine laboratory adjacent to Elkhorn Slough to monitor the effectiveness of the sanctuary status.

Response

Comment accepted.

Comment

The subject of multiple use is not addressed in DEIS. Manipulative research referred to in the DEIS (p.18) may result in long term changes in Elkhorn Slough. We should not try to preserve only, but should try to manage human activities to increase productivity or utility to the people of the State of California.

Response

Multiple-use is encouraged as long as it doesn't interfere with the primary purposes: research and education. Manipulation that would affect the slough in the long run is not permitted.

Robert Epperson, (7/8/79)

Comment:

The people who live in the area are taking care of it, otherwise there would be no wildlife to protect. If they are taking good care of the area, who needs the California Department of Fish and Game or OCZM?

Response:

The establishment of the Sanctuary will provide for uniform management of the resources now and in the future.

Comment:

Environmentalists talk as if the slough is a piece of history, which must be preserved for future generations. Sloughs come and go, they dry up, and others form elsewhere, whether man interferes or not. So, what are we protecting?

Response:

All coastal resources are changing, some slowly some faster. One of the purposes of an Estuarine Sanctuary is to study those changes. We can obtain information from these changes that can be applied elsewhere. It is not a purpose of the Sanctuary to stop natural processes.

Comment:

The proposed Sanctuary would be a waste of money, a bureaucrat's delight and a taxpayer's nightmare. Over a half a dozen local, state and Federal agencies would have their fingers in the Elkhorn pie. The management is too uncoordinated.

Response:

Your concern will be considered in the decision-making process, but we feel the management will protect the estuarine sanctuary resources.

Comment:

The DEIS is purposely vague, and poorly researched. The maps on pages 6 and 7 are erroneous. The road south of Dolan Road is not Elkhorn Road; it is Castroville Blvd. Castroville Blvd. and Dolan Road intersect about a quarter of a mile west of the Dolan Road - Elkhorn Road intersection.

Response:

See new map as discussed in General Response C.

Comment:

The Federal Estuarine Sanctuary Guidelines demand that an acquisition application contain "fair market value appraisal" The DEIS estimates that the acquisition and establishment of the Elkhorn Slough Sanctuary will cost a total of \$2,930,000 for the 1510 acres. That is only \$1940 per acre, hardly fair price. Either the land owners will be cheated, or the Sanctuary will cost more than \$2.93 million. I think the latter will prevail, although the land owners will have legal hassles before they get what is due them. Either circumstance is unacceptable.

Response:

See General Response D.

Comment:

The DEIS claims that one possible benefit of the proposed sanctuary might be the increase in value of surrounding properties. We affected property owners expect that the opposite would happen. Landowners fear the restrictions that the Sanctuary will bring.

Response:

We still support our contention, but General Response A discusses restrictions.

Butch Escobar Cement Contractor Co.  
(Mr. & Mrs. S. S. Escobar, no date)

Comment

As owners of property in the Elkhorn Slough area, the Escobars object to the sanctuary. They object to the expenditure of 3 million dollars for a few selected people.

Response

See General Responses D and E.

Comment

They are opposed to their lives and property being controlled. The proposed sanctuary is a far fetched idea involving more restrictions. They are tired of U.S. government officials telling them what to do and operating their tax money. They request to be "left alone".

Response

This position will be considered in the decision process. The concept of protecting certain unique areas within the U.S. is not new, as can be seen by the National Parks and Fish and Wildlife Refuges which have been established. OCZM is not telling anyone what to do, but is responding to a State request for matching funds to be used for land acquisition to establish an estuarine sanctuary.

### Comment

Mr. Escobar is a direct descendent of the first settler of Monterey County. His ancestors came with Father Serra from Spain. He has a big interest in the land which is to be taken from him.

### Response

We can appreciate strong ties to the land. Fortunately, nobody "takes" land in the United States any more. All public purchases involving federal dollars are governed by rules to prevent taking advantage of property owners.

The Forest Committee  
(Janice O'Brien, Chairman, 7/4/79)

Comment

Elkhorn Slough should be protected as a precious and unique resource. Development interests must be convinced that conservation and preservation are most positive forms of progress.

Response

Comment accepted.

C.H. Francis  
(Carmel, Ca., 5/22/79)

Comment

Elkhorn Slough is threatened. It is the last great area of its kind left in California, and must be preserved as a sanctuary.

Response

Comment accepted.

Friends of the Sea  
(T. Kowall, Santa Cruz, Ca., 7/9/79)

Comment

Elkhorn Slough Estuarine Sanctuary is important for research and enhancement of the region. Seldom are objectives of environmentalists and commercial fisheries so complementary. There are economic benefits to be gained from improved air and water quality and restricted urbanization. Conservation of the slough is of utmost importance, especially in light of potential OCS lease sales and natural disasters in other regions.

Response

Comment accepted.



Friends of the Sea Otter  
(Betty S. Davis Executive Secretary, 7/9/79)

Comment

The proposed Estuarine Sanctuary for Elkhorn Slough, and the boundaries and land acquisition process outlined in the DEIS are supported by the Friends of the Sea Otter. A preferred alternative appears necessary and reasonable. Coordinated management by the Department of Fish and Game, an Advisory Committee, and U.S. Fish and Wildlife Service, as proposed, will be beneficial. Elkhorn Slough needs the additional protection of sanctuary status and now is the time for such protection. An estuarine sanctuary would coordinate well with the proposed marine sanctuary for the Monterey Bay area. A few points of the DEIS need correction: on pg. 19, the endangered California least tern is not listed under 1.a., para. 1. Fish and Wildlife paragraph. "(Appendix IV...)" should read "(Appendix III...)." On page pg. 31, G. "Marine Resources," the reference "(Nybakken et al., 1977)" is not listed in reference section Appendix VII. On pg 33, "Tressus nattalli" should read "Tressus nattalla." The Elkhorn Slough Estuarine Sanctuary will provide long term gains in estuarine and marine wildlife and fisheries, as well as supporting the scientific research and educational opportunity. These will far exceed short term loss to agriculture or private land and harbor development.

Response

Comment accepted, changes made. OCZM appreciates the work of Dr. Nybakken and many others. One of the goals of the Advisory Committee will be to establish a concise estuarine bibliography.

Noel Frodsham, (7/7/79)

Comment

Please do not listen to the industrialists, the landowners, those who want only to make financial gain - listen instead to the scientists of many hues from our areas.

Response

All comments are evaluated by OCZM.

Ellen B. Gammack  
(Pacific Grove, Ca., 6/22/79)

Comment

Expresses support for Elkhorn Slough Estuarine Sanctuary. Feels that this area is very important to life there, in Monterey Bay, and in the ocean, as well as for teaching and research.

Response

Comment accepted.

Dorothy W. Gaylord  
(Pacific Grove, Ca. 6/22/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is important. The economic value of the slough is important to the Monterey Bay commercial fish industry.

Response

Comment accepted.

Golden Gate Audubon Society  
(Ingrid Lustig, 7/8/79)

Comment

The Society, representing more than 6,000 members, supports the proposed Elkhorn Slough Estuarine Sanctuary. Remaining wetlands are becoming more crucial to preserve wildlife. Elkhorn Slough is a major wintering and feeding ground for large numbers of shorebirds, including the endangered brown pelican and the California clapper rail. The slough is a historical resting and pupping site for harbor seals. It is also a significant field laboratory for research and education.

Response

Comment accepted.

Leonard Goulart  
(Moss Landing, Ca., 6/29/79)

Comment

Why does anyone want to spend a lot of money to acquire land around Elkhorn Slough for an estuarine sanctuary when it has been a natural sanctuary for years? The California Coastal Commission already has jurisdiction over all this area.

Response

See General Response E.

Comment

Studies on the slough have been conducted for years and future studies will not reveal "anything new (of any value)."

Response

We disagree. Research and education almost always reveal some new and often valuable information.

Comment

Benefits of a sanctuary can be reaped without spending money on taxable property.

Response

See General Response E.

Granite Rock Company  
(Bruce G. Woolpert, President, 7/10/79, Public Hearing Statement, 6/20/79)

Comment

Mr. Woolpert is the owner of parcel #2. Granite Rock Company owns 147 acres (#5) on the map of Elkhorn Slough in the DEIS. There appears to be no justification for taking the land above high-water mark, which comprises most of the land in this 85-acre parcel of farm land. He has had "employmentcenter use proposals" for this property because it is served by major roads and also the main line of the Southern Pacific Railroad. This land could be used as a recreational vehicle park, which is greatly needed in this area.

Response

See General Responses D and E.

Comment

Mr. Woolpert has over \$10,000 per acre in his land and the amount discussed for the total acquisition appears inadequate. His land is being taken after he dedicated it by quitclaim (63 acres) to the Moss Landing Harbor District for their control in 1963. At the time, he was told that he would never be harassed again by any governmental agency for acquisition.

Response

See General Response D. We certainly do not wish to distress or harass Mr. Woolpert or Granite Rock Company.

Comment

The money necessary for rerouting Highway 1 will be appropriated and the freeway between Castroville and Watsonville will include a bridge across the slough. The present two-lane road is a parking lot shared by farm equipment, automobiles, and trucks.

Response

See General Response H. To our knowledge the funding for rerouting Highway 1 is still unknown.

Comment

There should be less governmental agency and bureaucratic control of the Moss Landing waters. They are already adequately controlled by agencies such as the Harbor District.

Response

The proposed sanctuary does not include the Moss Landing waters and therefore there will be no "bureaucratic control" caused by the estuarine sanctuary.

Greenpeace Monterey  
(Beth Bosworth, Director, 6/20/79)

Comment

Elkhorn Slough deserves protection under provisions of the Coastal Zone Management Act and should be established as a sanctuary.

Response

Comment accepted.

Comment

The construction impact of the proposed Castroville - Watsonville segment of Highway 1 across the slough is incompatible with the ecological value of the slough. This project has not been recommended for funding in CALTRANS' Regional State Transportation Improvement Program because it is not considered cost effective as of June 1979. Improvement of present right-of-way would be preferable and adequate.

Response

See General Response H.

Comment

The economic benefit of maintaining and improving the nursery and feeding grounds of the slough should be of value to commercial and sports fisheries.

Response

Comment accepted.

Comment

How will "ownership of comparable control" over sanctuary lands be achieved? Will it involve relocation, regulation of development rights, or what? What "attempts will be made ... to ensure that acquisition is as nondisruptive as possible?"

Response

See General Response D. The proposed acquisition will be by negotiation, and by definition this should be non-disruptive.

Comment

The FEIS should include a provision that no land will be condemned and that fair market value will be paid for private land.

Response

See General response D.

Comment

Will there be any expansion of the PG&E tanker terminal near the mouth of the slough in light of potential dredging and oil spill impact?

Response

See General Response A.

Comment

Pesticide use and potential Monterey Bay oil spills could harm the slough. These threats must be dealt with.

Response

Comment accepted. Threats to the slough should be addressed by the appropriate agencies and will most likely be included in the Monterey County LCP.

Cheryl Ann Hannan

(Woods Hole Oceanographic Institution, 6/21/79)

Comment

Designation of the proposed Elkhorn Slough Estuarine Sanctuary is important. The Slough represents a very unique fauna because it was only opened to the ocean for direct mixing with salt water when the Moss Landing harbor was dredged in 1946. Much of the slough serves as a nursery for certain offshore fauna. The slough is an ideal place for research because it is accessible by boat, conducive to year-round SCUBA diving, and supports intertidal mudflats accessible for studies. Elkhorn Slough provides rewarding educational opportunities to a variety of persons. Natural history studies are unique and interesting and may be destroyed by heavy consumptive use. Protection of Elkhorn Slough will perhaps insure that one inland estuarine system and the "natural flora and fauna" remain intact along the California coast.

Response

Comment accepted.

Bobbie Harms

(Carmel, Ca. 6/15/79)

Comment

It is imperative that Elkhorn Slough be declared a sanctuary to protect marine and other wildlife.

Response

Comment accepted.

Bob Harris

(Public Hearing Statement, 6/20/79)

Comment

Notes that landowners do not fault preservation of wildlife in the slough but are concerned with their own preservation. Notes that the Coastal Commission has put restrictions on agriculture that will close down present operations, and they fear a similar fate in the slough watershed area. They fear acquisition of land at less than the value of land and improvements. Feels that affected landowners should have been notified in writing of impending restrictions proposed in the DEIS. Feels that the total area affected should be defined and

landowners should be notified and offered a chance to comment. Feels that not enough facts about future management of the sanctuary have been presented and recommends postponement until these issues are resolved.

Response

Comment accepted. We have attempted to do this in the FEIS, especially see General Response A.

Harry Hicks

(Public Meeting Statement, 6/22/79)

Comment

Concerned about the U.S. Fish and Wildlife Service Fish Hatchery closing in Mount Shasta. Money for sanctuary might be better spent keeping hatchery open.

Response

These are two separate proposals.

Rod Holmgren

(Public Hearing Statement, June 20, 1979)

Comment

Elkhorn Slough is one of the most highly productive habitats on this continent. It must be declared a sanctuary so it can be protected.

Response

Comment accepted.

Comment

Some of the problems that should be studied in the sanctuary are:

- the effects of discharge of hot water from the PG & E Moss Landing Plant;
- the effects of trace chemicals discharged into the slough;
- the effects of the slough on all forms of marine life in Monterey Bay, with special emphasis on commercially useful fish and the effects of oil spills on marine life in the estuary.

Response

Suggestions accepted.

Hopkins Marine Station

Alan Baldrige

(Public Hearing Statement, 6/20/79)

Comment

Supports designation of the sanctuary. Notes that availability of the slough has aided the growth of marine science educational institutions bordering Monterey Bay and also notes that Hopkins has made abundant use of the slough for research and education. Feels that Elkhorn Slough has national importance and is valuable for long term studies. Notes that while Hopkins is primarily interested in invertebrates it also feels that the health of the total environment is essential to the survival of its parts.

Response

Comment accepted.

Dorris K. Horn, (7/7/79)

Comment:

Elkhorn Slough is a valuable wildlife habitat area that should be protected. Many species of birds utilize this area for wintering and stopovers during migration. Preserving this area is important to people who enjoy the Slough for its aesthetic and scientific values.

Response:

Comment accepted.

Dan Hudson

(Public Hearing Statement, 6/20/79, 7/10/79)

Comment

Expressed concern with the way the meeting has been handled, the way notice was given, and the location of the hearing. Congressman Panetta gave the impression that the hearing would be continued Friday and would not be only an information meeting.



International Shellfish

Richard Eissinger (Public Hearing Statement, 6/20/79)

Comment

The consultants that helped prepare EIS limited their contact with International Shellfish to a 1 1/2 minute telephone call. This was not enough time to explain the impacts and information needed. The DEIS is not fact; it is rhetoric made up in Sacramento rather than on the site.

Response

Additional information has been added about mariculture in the FEIS body and the comments and responses section.

International Shellfish and Elkhorn Sea Farms

Scott Hennessy (Public Hearing Statement, June 20, 1979)

Comment

Mariculture should be included in any management plan for Elkhorn Slough.

Response

Comment accepted. Mariculture will be represented under "industry" within the Property Owners Subcommittee.

International Shellfish Enterprises

(Steven P. Henderson, 7/10/79)

Comment

The International Shellfish Enterprises is an advanced mariculture enterprise situated in Moss Landing, California. It has been licensed since 1973 to use designated areas of Elkhorn Slough for the breeding, nursery, and growing of various species of oysters and clams. This has enabled it to become a leading example of the potential and value of commercial mariculture. The International Shellfish Enterprises has established a constructive and favorable professional reputation throughout the U.S. and abroad. The company's production is dependent, to a major degree, upon the quality of the waters in Elkhorn Slough, and thus many of their objectives clearly match the goals and objectives for the maintenance of a natural estuarine balance, as outlined in the Estuarine

Sanctuary guidelines. The ability to survive as a commercial enterprise, and as an ongoing laboratory for maricultural development, is acutely dependent upon continued access to slough waters. This includes the implementation of Elkhorn Slough and its preservation in an undeveloped state. At the same time, International Shellfish is worried about the burden of additional layers of governmental regulations and the unpredictable impact that a new management agency may have upon both existing and proclaimed policies and objectives. The proposed sanctuary will do much to advance the preservation of the slough. The International Shellfish Enterprise is a source of support and a reinforcement of the recognition of the value of aquaculture.

#### Response

Comment accepted. OCZM and California Fish and Game support mariculture in Elkhorn Slough. We agree that the goals are compatible and look forward to the possibilities of mutually beneficial research. The waters are not within the proposed sanctuary boundary and you will continue to lease from the MLHD.

#### Comment

The Madrone Associates Study created substantial ambiguity on the subject of mariculture. On pages 131-132 of this study, there is claim that the "opportunity for commercial mariculture will benefit...." and on page 36-38 there is a recommendation that only "small-scale commercial mariculture" be allowed as a compatible resource use within the proposed sanctuary. How will these terms be interpreted by a new management agency, the proposed Sanctuary Advisory Committee, and other groups having influence over use of the slough waters if the area becomes a sanctuary? Classification of International Shellfish operation in relation to these terms should be given, as well as written assurance that these operations, as planned and under implementation, will not be required to undergo change as a consequence of sanctuary designation. Because mariculture is still an imprecise art, subject to change and refinement in terms of operational application, assurance of an understanding and responsive agency will be needed for matters of permit modification. The DEIS does not clarify the ambiguities referred to, and fails to adequately identify the needs of mariculture and its opportunity for continued existence and compatibility within the proposed sanctuary. This matter should be resolved.

#### Response

As stated previously, mariculture is a desired use of Elkhorn Slough. The size and number of operations is the responsibility of State or local agencies. Assurance is given that your present or planned operation will not be required to undergo change as a consequence of sanctuary designation. Assurances are also given that mariculture will be viewed by NOAA/OCZM, and the California Department of Game and Fish, to be a positive use compatible with the proposed estuarine sanctuary.

#### Comment

The sanctuary "buffer zone" is not discussed in detail in the DEIS but continued reference is made to Sanctuary Management working closely with other existing (governmental) agencies to amend procedures as necessary. What types of consequences might the Sanctuary Management group determine to be an interference? Will existing regulations be altered to create an additional burden on those living and operating within the buffer zone? The following questions should be addressed and satisfactorily answered:

1. Will there be a "buffer zone" or perimeter influence area that will be subject to regulatory change as a direct or implied consequence of Sanctuary Management needs.
2. Whether or not such a "buffer zone" exists either in fact or in practice, what future influence will the sanctuary impose on existing water quality and air quality standards as applied in the peripheral area?

#### Response

No buffer zone will exist in fact or in practice. The sanctuary, itself, will not affect existing or future water quality standards. See General Response A.

#### Comment

How will management disputes be resolved when differences of opinion occur among the U.S. Fish and Wildlife Service, California State Department of Fish and Game, and the Sanctuary Advisory Committee (S.A.C.) (generally and especially in relation to those "approved" authorities granted to S.A.C.)?

#### Response

Cooperation is obviously the goal, but each agency has legal responsibility to manage lands according to either Federal or State Law. Differences of opinion will remain as such. The Advisory Committee is designed to minimize difference, but does not have authority to legally resolve them.

#### Comment

How can effective cooperation exist between the Sanctuary Management group and the Moss Landing Harbor District when the latter agency, which is given continued jurisdiction over Slough waters in the Sanctuary plan, has publicly proclaimed their opposition to the Sanctuary (Resolution 223, May 10, 1979)?

### Response

If the estuarine sanctuary grant is awarded, it is hoped that the Moss Landing Harbor District will be a positive member of the Advisory Committee. The MLHD, or any other member, may request to be taken off the advisory committee at any time.

### Comment

Is it possible that U.S. Fish & Wildlife Service lands could be transferred to the Sanctuary or vice versa as a consequence of the proposed actions or in the event of management disputes?

### Response

It is not legally possible.

### Comment

Is there any way in which the slough waters could or might be taken from the jurisdictional control of the Moss Landing Harbor District; if so when and how could this occur and what would trigger or stimulate such action?

### Response

This is not known. We presume that the State Legislature/Governor could pass a law to this effect.

### Comment

Since a part of the effective sanctuary area is to include U.S. Fish & Wildlife Service lands, is it possible in the future management of the sanctuary that the California State sovereignties could erode and in turn be influenced and/or controlled by Federal directives?

### Response

Legally or practically it is not very likely.

### Comment

What guarantees will exist, in advance of the formal approval for the sanctuary, that the featured public benefits (i.e., land and water recreational opportunity, wildlife observation, commercial mariculture, fishing, hunting, etc.) will survive the creation and management of the sanctuary over time?

### Response

There are always legal remedies for any substantial changes in the use of an estuarine sanctuary. This type of question is difficult to answer since no guarantee can be given that commercial mariculture, wildlife observation, or recreation will survive over time.

#### Comment

What changes in attitude and/or law will occur with respect to the consideration of residential and commercial development or expansion? What will be the impact on highway and rural traffic patterns in the peripheral areas? Will any restrictions evolve regarding trucking and commercial vehicles in the influence zone of the Sanctuary? Would Sanctuary status specifically preclude the re-routing of Highway 1 through the Sanctuary should the State Department of Transportation decide to pursue reconstruction or re-routing between Castroville and Watsonville?

#### Response

See General Responses A and H.

#### Comment

Should drainage from peripheral areas be considered detrimental to the management of the Sanctuary by the then acting management agency or agencies, what power and influence would exist and combine to force a change in existing drainage and wastewater management regulations and policies? What types of changes could be anticipated? Would Sanctuary status and subsequent sanctuary management cause any change in the existing rights of peripheral or influence zone property owners to claim and/or extract water from wells and/or existing streams? Could Class 1 Air Quality Control designations be applied to the influence zone areas as a consequence of the need for effective sanctuary management?

#### Response

See General Response A. However, it should be recognized that existing Federal and State Law control air and water quality. The proposed sanctuary will not.

#### Comment

Could mariculture be deemed compatible at one point and later classified as incompatible by management authority? What is the jurisdictional authority of the Sanctuary Management group to (objective B) "Preserve and maintain the Slough for ecological and cultural/historical research . . ." when those very waters will be owned by (California) State Lands and managed by the Moss Landing Harbor District?

#### Response

As stated, mariculture is currently, and will be for the foreseeable future compatible. We do not expect or foresee this situation changing. There is no jurisdictional control over the Elkhorn Slough water; it is retained by the Moss Landing Harbor District.

#### Comment

Why do you consider that the "no-action" alternative (referenced on page 23)

would have adverse environmental effects on the area? Is it not true that a carefully adopted Local Coastal Plan, through the auspices of the California State Coastal Commission, could preserve many of the "net benefits" and probably at a lower cost to government. Is this not a realistic alternative that should be considered?

Response

If it were possible for the LCP to exclude development over 1500 acres of land and provide education and research opportunities over time, it would be the preferred alternative. However, we do not consider this to be a realistic alternative for establishing an estuarine sanctuary.

Comment

What acts constitute "tampering with the natural system" and what is considered "manipulative research" as referred to in the DEIS? Is it possible that mariculture could be classed as one of these and thus be considered disruptive or unacceptable within the sanctuary boundaries?

Response

Basically, manipulation or "tampering with the natural environment" involves an alteration to the natural environment for human needs. The filling or dredging of wetlands is an example. Mariculture does not take place within the proposed boundaries. However, we feel mariculture is relatively non-disruptive to the natural system and would be acceptable if it were within the boundaries.

Comment

On page 35 of the DEIS under paragraph 5, there is a reference to oyster growth (on racks) that it "... is stimulated by the warm water discharge from Pacific Gas and Electric." This statement is in error. We have used these racks more than 3 years and have not been able to measure any such "stimulation" or other associated benefit.

Response

This reference has been omitted; further research is recommended on this subject.

Comment

In addition to the Industrial and Commercial listing on page 33, you should add the names of the following for commercial mariculture purposes:

Pacific Mariculture, Inc.  
Pigeon Point Shellfish Hatchery  
American Shellfish Corporation  
International Shellfish Enterprises

Response

Comment accepted, and additions made.

Jane Jewett, (6/20/79)

Comment:

There is a very important perspective that many people have not considered, it is the value of the Slough as a human experience providing pleasure and enjoyment. There is so little left to save in California - certainly nothing like Elkhorn Slough. It would be wrong to let this opportunity slip away.

Response:

Comment accepted.

Robert Jazwin, Castroville, Ca., 7/8/79

Comment

Is in strong agreement with the concept of keeping this area as beautiful as possible. The Elkhorn Slough project has not been and cannot be effectively managed as it is now structured. It is the responsibility of Federal/State agencies to make contact and advise of the scope and effect of the proposal. Jazwin feels that he cannot make any substantial comment regarding the fairness of the offer until one is made. The notice of hearings has been mismanaged. Notes that the Department of Fish and Game have only provided an approximation of effects the proposed sanctuary would have on his property. Questions the impact of sanctuary acquisitions on mortgages if land is sold and the balance is due on the whole property. States that unless this issue is addressed, people may lose their property even if most of it is not intended to be purchased. Feels that the planning of this project is difficult to manage and later acquisition will be even more difficult because of the fuzziness of management issues and lack of public participation.

Response

See General Responses B and D. The question of effect on mortgages should be discussed with Mr. Schmidt of the Wildlife Conservation Board. A partial release might be a viable alternative. The California Fish and Game Department manages thousands of acres in California similar to Elkhorn Slough. In Elkhorn Slough, substantially more involvement by various organizations (i.e. education, scientific, property owner, and fishermen) is proposed with the creation of the Advisory Committee.

#### Comment

There should be an election of the project manager and governing board. Payments of fair market price for all land acquired should be made and responsibility should be taken for solving any legal questions arising from transfer of only a portion of a parcel. Property owners should be allowed to participate and manage the sanctuary so homeowners can remain living in the area they have already preserved. Affected parties should be contacted directly rather than allowing them to discover for themselves intended plans, and sufficient information should be provided that they can make substantive comments. Recommends that if more land is needed for a buffer zone around the sanctuary, it should be purchased at fair market value.

#### Response

Election of the property manager and the governing board is not possible because of State and OCZM requirements. Fair market value will be paid for all purchased land (see General Response D) and the State will ensure that no legal problems arise from the sale of a portion of any parcel. It is the intent of Public Law 91-646 that the public will compensate any property owners for any additional expenses incurred by selling to a public agency. All property owners have been sent an assessor's map roughly depicting the proposed acquisitions. There will be no buffer lands, and any lands within the sanctuary boundaries shall be purchased at fair market value.

Gregory L. Johnson

(Watsonville, Ca. 6/22/79, Public Meeting Statement, 7/11/79)

#### Comment

Elkhorn Slough should not be designated as an Estuarine Sanctuary. The preparers of the DEIS expressed great concern over the protection of various plants and animals but made very little mention of the impact on property owners and residents surrounding the proposed sanctuary. The \$1000 per acre assessment of proposed sanctuary land is barely 10% of the fair market value.

#### Response

See General Responses A and D.

#### Comment

Landowners and residents should have an opportunity to express their concerns. Other participants at the public hearing were given advance notice and were well prepared.

#### Response

See General Response B.



Comment

Why fund research on obscure plants and animal life?

Response

Sulfa drugs, synfuels, and many other important products now or soon to be in everyday use come from research on obscure plants and animal life.

Comment

At the hearing there was a total lack of concern for agricultural interests that would be affected by this proposal. Reference to regulations on agriculture in the sanctuary buffer zone is lacking.

Response

See General Responses A and I.

Comment

The government will implement condemnation proceedings, forcing sale of home and property at greatly reduced price and relocation of families. Elkhorn Slough is already protected and regulated by a number of State and Federal Agencies. Seizure of private lands is not warranted.

Response

See General Response D. Legally, such condemnation and seizure is not possible. Also see General Response E.

Christine Jong

(Soquel, Ca., 6/8/79)

Comment

Expresses support for Elkhorn Slough Estuarine Sanctuary. The slough is a unique area--one of the only remaining undeveloped salt marshes on the Pacific coast. The slough provides refuge for many migrating birds, several species of endangered animals and plants, and is important to many populations of fish and invertebrate species--some of commercial value. The slough is needed for recreation, is important to scientific research, and serves as a model for understanding shallow water processes. Public recreation and education programs should reflect these values. Funds for the project should be made available as soon as possible.

Response

Commented accepted.

James Josoff

(Public Hearing Statement, 6/20/79)

Comment

Feels that the sanctuary proposal is another "land grab." Feels that resource protection zones will encompass a huge area around the sanctuary.

Response

See General Response A.

Comment

Contradicts the scientific testimony on the value of the estuary, based on a March 24, 1979, article of Science News, claiming that estuaries are not ecologically vital for the species that inhabit them.

Response

There are differences of opinion regarding the content of the referenced article.

Kaiser Refractories

(Jack Elmor, 6/20/79, John T. Corcia, 6/22/79, Public Hearing Statement)

Comment

In the DEIS it is stated that "Kaiser Refractories...will not be affected." The DEIS does not address several areas that should be of concern to surrounding property owners as well as to Kaiser Aluminum and Chemical Corporation. NOAA and the California Department of Fish and Game have condemnation authority. Will they or other agencies on their behalf use condemnation procedures in cases where the property owners are unwilling to sell?

Response

See General Response D. The use of condemnation is not foreseen on land owned by Kaiser.

Comment

Parcel #7 is essential for Kaiser's groundwater operations. What provisions will be made to insure and protect present and future water supplies and pipeline rights of way?

Response

Negotiation with Kaiser will be made on a willing seller-buyer basis, and the State recognizes concern about groundwater supplies, pipeline rights of way, or other uses (See above also).

Comment

The DEIS fails to recognize the impact of the sanctuary under the Federal Clean Air Act of 1977. Designation of a Class I air area could effect surrounding area.

Response

There will be no impact; also see General Response A.

Comment

What effluent discharges to the sanctuary will be allowed and what restrictions will be imposed?

Response

The sanctuary will not affect any discharges/restrictions which currently exist under State or Federal law. See General Response A.

Comment

The establishment of Coos Bay Estuarine Sanctuary has had a significant negative effect on industrial development. Will the establishment of Elkhorn Slough Estuarine Sanctuary discourage future development

at Moss Landing? What specific new rules will be imposed on surrounding areas that might effect future development?

Response

Erroneous information has been disseminated about the South Slough (Coos Bay) Estuarine Sanctuary. There is no legal mechanism for any sanctuary to influence activities outside its boundaries.

Comment

The discussion of "buffer zones" is not adequately addressed in the DEIS. If the sanctuary is approved, would it be possible to expand land areas at a later date, such as to include Moro Cojo Slough and land between it and Elkhorn Slough?

Response

See General Response A.

Comment

Will transportation (rail, truck, or marine) in and around the sanctuary be restricted in the future and, if so, what specific rules and regulation could apply? The DEIS discusses the beneficial effects of increased access but fails to discuss whether property owners will be required to provide access.

Response

Transportation will not be affected. For the effects on Highway 1 see General Response H. Private property owners outside the sanctuary boundaries will not be required to provide access. Also see General Response G.

Comment

The DEIS should be rewritten to address both economic and environmental impacts.

Response

The FEIS reflects economic and environmental impacts that were brought to our attention.

Comment

The duties of the Sanctuary Advisory Committee appear to extend influence beyond the boundaries of the sanctuary.

Response

The authority of the Advisory Committee is defined in the FEIS. Any actual influence will be purely advisory, only in those areas mentioned.

Kirby Ranch Road Association

Greg Johnson, (Public Hearing Statement, 6/20/79)

Comment

Members of the association have property in the proposed buffer zone, and property is proposed for acquisition. The affected property owners have not been contacted. Contrary to section 921.21(a) of the Federal guidelines, affected property owners and agricultural interests have not been considered. The impact of sanctuary designation on property owners is not discussed in the DEIS. Only the directly affected are in favor of the sanctuary and these sanctuary proponents are out to stop agricultural use, industry, or anything that will conflict with bird-watching.

Response

See General Responses A and E. Affected property owners have been contacted and the impact on them is addressed in the FEIS. We do not feel that the DEIS or FEIS indicates a desire to "stop" existing activities.

Comment

The amount of money appropriated will be only 10% of the proposed acquisition, at fair market value. The DEIS does not mention appraisal of property to be acquired. The loss of property taxes is grossly underrated in the DEIS. It is less than 10% of the actual property tax loss.

Response

See General Response D.

Comment

If the planning and organization of the public meetings is any example of the ability involved organizations have to plan for the sanctuary, we are in trouble. There is no need for another "cancerous growth" of bureaucracy in the area and property owners should band together to stop this proposal.

Response

See General Response A,B, and E.

Sylvia Knapton, 7/10/79

Comment:

It is important to preserve this precious Elkhorn environment for future generations. The establishment of the Sanctuary will enhance life for the residents of Monterey Bay - educationally, recreationally, even commercially.

Response:

Comment accepted. Ms. Knapton also submitted a chart suggesting uses of the marine education center, we wish to thank her for her excellent suggestions, these will be taken into account in the management of the Sanctuary.

Nada Kovalik, (6/18/79)

Comment:

Elkhorn slough is important and beautiful and it must be preserved. The slough is the mother and protector of many forms of life.

Response:

Comment accepted.

Frances and Jefferson Lackey  
(Pebble Beach, Ca., 7/4/79)

Comment

Elkhorn Slough is a most important natural resource for California Coastal waters. No commercial or recreational activities should be allowed to expand to the extent of endangering the marine productivity of the coast.

Response

Comment accepted.

Betty Landess  
(Property Owner, Public Hearing Statement, 6/20/79)

Comment

There is a need for a bird and marine sanctuary, but property owners are concerned with due process, such as receiving proper advance notice and information on the future public meetings.

Response

Comment accepted. See General Response B.

T. B. Landress, (7/10/79)  
(Property owner in Elkhorn at Elkhorn Road, Strawberry, and Hidden Valley Road)

Comment:

Opposes the "Elkhorn takeover". The property owners have been taking care of the property for years, and want to continue to preserve it, without the government. How big will the restricted zone be?

Response:

See General Responses A and E.

Glynn and Lorri Lockwood  
(Big Sur, Ca. 6/22/79)

Comment

The designation of Elkhorn Slough as an Estuarine Sanctuary is important.

Response

Comment accepted.

Kay and Carl Larson  
(Monterey, Ca., 6/19/79)

Comment

Establishment of an Elkhorn Slough Estuarine Sanctuary is important. The slough is a unique and fragile wetland, highly vulnerable to contamination from urbanization or commercial enterprises, and easily destroyed by human intrusion. The slough desperately needs its scientific, educational, and natural economic values protected, particularly the Monterey Bay Fishing Industry. The slough supports spawning grounds, is a habitat for amphibians and small mammals, and is a permanent or seasonal residence for around 150 avian species, including the endangered California clapper rail and the brown pelican. Well-organized and well-financed organizations exert extreme pressures on local government and agencies to abandon restrictions. The California Coastal Council is one such developer. Monterey Bay-based Fishermen's Organizations are not opposed to protecting the slough, the nursery of their livelihood, but may be leery of federal controls of any kind. Fishermen's opposition may be alleviated if the California State Fish and Game is made lead management agency.

Response

Comment accepted. However, all comments will be considered prior to a final decision. The California State Fish and Game is the lead management agency.

League of Women Voters of the Monterey Peninsula  
(Caroline Sage, President, 6/20/79) and  
(Mary Ann Mathews, Public Hearing Statement, 6/20/79)

Comment

The proposal to designate Elkhorn Slough as an Estuarine Sanctuary is important. Without the protection of sanctuary status, the slough, which is already threatened by potential oil spillage from the PG&E facilities at Moss Landing and by overdevelopment in its watershed, will go the way of other estuarine systems in California. Elkhorn Slough provides an invaluable habitat for breeding fish and various other forms of wild flora and fauna. The slough is an outdoor laboratory for students and scientists from many schools in Monterey County and surrounding areas. Elkhorn Slough is a non-renewable resource which, once destroyed, cannot be brought back. OCZM should accept the DEIS and proceed with sanctuary designation.

Response

Comment accepted.



Mavis A. Martin, (undated)

Comment:

There is no advantage to spending millions of dollars buying property that is already being taken care of by the owners who are paying taxes. The area is already strictly regulated, so the danger of further deterioration is pretty remote. The designation of the Sanctuary is unnecessary.

Response:

Your concern will be considered by the Office of Coastal Zone Management before the Sanctuary is designated. Also see General Response E.

Melvin Martins, (undated)

Comment:

The formation of a Sanctuary will provide assurance that there will be a place to moor his boat in the mooring basin. The Moss Landing Harbor should be maintained for the fishing industry, much needed new berths should be built, and the Sanctuary should not include this part of the Slough. Moss Landing Harbor is now protected with many Commissions, Committees and Agencies. The Sanctuary may jeopardize the fishing industry.

Response:

See General Response A. The sanctuary will not impact activities in Moss Landing Harbor, including mooring of boats.

Mrs. W.V. Gramham Matthews  
(Carmel Valley, Ca., 7/3/79)

Comment

Supports the proposed Elkhorn Slough Estuarine Sanctuary. Scientific, economic, and educational values have been recognized by specialists for years but only recently has the public become aware of this multi-purpose resource. The estuarine sanctuary proposal is a timely effort to prevent dredging, filling, and pollution. Earlier efforts were made to identify sensitive and threatened coastal areas along Monterey County, but were thwarted by pressures from development, industry, Moss Landing Harbor District, and landowners. The Fish and Wildlife Service's proposed Wildlife Sanctuary on the north and west of the slough should be established. The sanctuary will serve as a benefit to the whole area.

Response

Comment accepted.

Dolores McGlochlin, (7/5/79)

Comment

Elkhorn Slough should be protected.

Response

Comment accepted.

Marilyn D. McLoughlin, (undated)

Comment:

Supports establishment of Elkhorn Slough as an Estuarine Sanctuary to maintain the Slough as a valuable resting place for numerous bird species; protected growth area for juvenile commercial and sport fish; and an irreplaceable facility for biological and botanical education.

Response:

Comment accepted.

Dr. and Mrs. H. Medwin  
(6/21/79)

Comment

Establishment of the Elkhorn Slough Estuarine Sanctuary is important. Natural resources are being destroyed by development, pollution, etc. It is most important to preserve what is left.

Response

Comment accepted.

Mr. & Mrs. David Metz  
(Carmel, Ca., 7/7/79)

Comment

Concerned about protecting Elkhorn Slough for future generations. We must cease dredging, filling, and pollution. Elkhorn Slough is one of the few natural estuaries left in California.

Response

Comment accepted.

Elizabeth Monning, (7/7/79)

Comment:

Preserving Elkhorn Slough as an Estuarine Sanctuary is vitally important.

Response:

Comment accepted.

Monterey Bay Aquarium Foundation  
(Stephen K. Webster, 6/7/79)

Comment

The Slough is important as a resource for outdoor education and interpretive programs. The great abundance and diversity of organisms and habitat types within the Slough is valuable. It must be protected in its natural state and utilized as a center for public education.

Response

Comment accepted.

Comment

The vociferous opposition to the sanctuary program being mounted by property owners and others with economic interests is both predictable and understandable. It should not carry more weight than it deserves in the deliberations concerning the future of Elkhorn Slough.

Response

Careful consideration is being given to all who have expressed concern.

Monterey County Foundation of Concern, Inc.  
(Hellmut L. Meyer, Executive Director, 7/6/79, public hearing presentation, and public meeting)

Comment

States firm opposition to the establishment of an estuarine sanctuary for Elkhorn Slough at Moss Landing. Remains unconvinced of the alledged need to regulate "uses and activities outside the sanctuary." Neither PG & E's or Kaiser Refractories operations have had any observable or documented impact and to establish "a functional buffer from human activities and disturbances," when such activities have coexisted without any inimical effects on the fauna for all these years, is not necessary.

Response

See General Response A and E.

Comment

Funds available for land purchase above the 10-15 foot contour line offer current property owners less than one-fifth of the money they paid for it and about one-tenth of its current market value. This is unrealistic and in contravention to the law, which precludes the taking of private lands for public use without just compensation. The proposed sanctuary has already served to cloud title on properties in this area.

Response

See General Response D. We have no presented proof that the sanctuary has clouded any titles in the area.

Comment

The DEIS does not spell out possible restrictions that might be imposed on persons in the area immediately outside the proposed sanctuary boundary.

Response

See General Response A.

Comment

How will the sanctuary regulations relate to the interpretation of California Statute 1968, Chapter 1257, #1583 which states "it is unlawful to enter upon any ecological reserves established under the provisions of this article or to take therein any ... fish, mollusks, crustaceans ... except in accordance with the regulations of the commission ..."?

Response

This regulation does not apply to the estuarine sanctuary, since the water area, which includes substantial mudflats, is not within the proposed boundary.

Comment

If an Environmental Impact Review is required under the California Environmental Quality Act for PG&E transmission lines or for any development in which there may exist adverse impacts on the environment, the onus of proof and the expense involved should rest with the State.

### Response

The intent of the California Environmental Quality Act places the burden on the applicant proposing changes affecting the environment. OCZM or the Federal Government has no influence over the provisions of this Act.

### Comment

Why are existing authorities deemed insufficient to preserve the "endangered" fauna of Elkhorn Slough unless an estuarine sanctuary is established? The proposed sanctuary represents another unneeded layer of government, which would serve to restrict commercial and recreational fishermen, disenfranchise property owners, and throw farmers off their land.

### Response

See General Response A and E.

### Comment

Paragraph 921.21 of the Federal Estuarine Sanctuary Guidelines covering citizen participation, location, and notice for public hearings and notice of property owners has not been met. The hearing should have been in Castroville.

### Response

We feel all provisions of our guidelines have been met. The public hearing in Monterey was in the project area (20-25 miles from Elkhorn Slough). However, to avoid any inconveniences, two meetings were held in Castroville. Also see General Response B.

### Monterey Peninsula Audubon Society

Jud Vandever

(Public Hearing Statement, 6/20/79)

### Comment

States that they have studied the DEIS, find it adequate and, are very pleased with it. States that the Audubon Society is in full sympathy with the creation of such a sanctuary. Suggest (p.33) listing the Monterey Peninsula College as a user of the slough.

### Response

Comment accepted, suggestion added to FEIS.

Mrs. James Moody  
(Carmel, Ca., 7/6/79)

Comment

Elkhorn Slough is a unique feature of the California coastal ecology, important feeding and breeding grounds for many species of fish and mollusks, a vital stop-over for thousands of migratory waterfowl, and it supports one of the finest stands of salicornia on the West Coast. The Nature Conservancy protects a portion of the slough, and sanctuary status will facilitate similar protection for the rest of the slough. The slough must be preserved while there is still time.

Response

Comment accepted.

Margaret Moody, (7/6/79)

Comment:

Elkhorn Slough in Monterey County is a unique feature of our coastal ecology. These waters are important feeding and breeding grounds for many species of fish and mollusks. It is a vital stop-off for thousands of migratory duck and shorebirds. The bordering wetlands are fairly active with dowitchers, dunlins, egrets, yellowlegs, etc., as well as some species of duck, such as mallard and teal which remain to nest in the territory. The Slough contains one of the finest stands of salicornia on the West Coast. The Slough must be protected while there is still time.

Response:

Comment accepted.

Earl L. and Lois L. Moser  
(Carmel, Ca., 7/10/79)

Comment

Too many wetlands along the U.S. Pacific Coast have been destroyed, and Elkhorn Slough is among the remaining. It should be protected as a breeding and nursery area for many ocean species. Supports the proposed Elkhorn Slough Estuarine Sanctuary.

Response

Comment accepted.

Moss Landing Chamber of Commerce  
(Donald Dunsford, Member, June 1979)

Comment

Do not create any Federal or State managed sanctuary in or around Elkhorn Slough.

Response

Comment will be taken into consideration.

Moss Landing Commercial Fishermen Association  
Dave Danbom, President, (Public Hearing Statement, 6/20/79)

Comment

The people in Castroville will be paying the bill for the sanctuary and that is why the testimony is different from that in Monterey. Commercial fishermen are concerned about the environment and will suffer from environmental loss. Commercial fishermen would like to see the slough as it is; they are not supporting major industrial or commercial development on the slough, or removal of the bridge. Information provided by Bob Hudson from the Coos Bay Sanctuary District indicates that the sanctuary designation has stopped everything, pile driving, harbor expansion, etc. Because of this, the membership voted to oppose the estuarine sanctuary.

Response

See General Response A. We feel that estuarine sanctuary status will not basically change the present status of the area. The information provided regarding the Coos Bay Estuarine Sanctuary is erroneous.

Moss Landing Commercial Fisherman

(Edward A. Martin, Public Hearing Statement, 6/20/79)

Comment

Martin is not opposed to Elkhorn Slough becoming an estuarine sanctuary but does oppose the "wholesale rape" of property owners, sport fishermen, hunters, and commercial fishermen if the sanctuary comes into being and a dozen agencies govern it. It will be too valuable for public use; only a few students and the environmental community will be able to use it.

Response

We do not agree that only a few students and the environmental community will be able to use the slough. One reason for acquiring property is to provide more access for the general public to see and use the area in a constructive way, including property owners, sport fishermen, hunters, etc.

Comment

The slough is a valuable nursery area for fish. However, the estimate given for the percentage of commercial oceanic species originating in the slough (40%) is a gross exaggeration. The impact of the slough on commercial fishing is very minimal.

Response

We agree that the impact of the slough on commercial fishing fleets is minimal. The economics of species originating in the slough would be an excellent research project for future study.

Comment

Criticizes the purpose of the estuarine sanctuary (i.e. to provide long term research and education and to provide information essential to coastal zone management decisionmaking), saying that this is like raising beef for a monster.

Response

California law gives authority to various levels of government to regulate, control, and manage the coastal zone of the State whether or not a sanctuary is established. The knowledge which the sanctuary research and education will provide can be used to make better, more informed governmental decisions which impact on the use of similar estuarine environments along the entire coast. We believe this is a desirable benefit for all people who reside, work, and recreate on the California coast.



Comment

The DEIS fails to show how this project is going to be funded after three years. Will the funds come from increased taxes in Monterey County?

Response

After three years, the funding responsibility rests with the State. Funds will come from the CF&G Department Budget or from outside grants for management, research, or operations.

Comment

Landowners, farmers, commercial fishermen, and industrial representatives are not listed on the proposed Advisory Committee.

Response

These representatives have been added. See General Response I.

Comment

If the sanctuary is limited to the high water mark without excessive "buffer zones", it will receive more support.

Response

The rationale for acquiring land up to the 10 foot contour line (and above that line for certain purposes) is explained in General Response E. The "buffer zones" that were involved in the Madrone Study are not incorporated in the sanctuary proposal. See General Response A.

Comment

Unless it is written into the law that the proposed sanctuary will not hinder commercial fishermen or any of their support facilities, including additional berthing, shipyards, fuel docks, buying stations, and any other facility deemed necessary to the fishing industry, we could not support the estuarine sanctuary and suggest no action be taken.

Response

Language was added to the FEIS clearly stating that the proposed sanctuary will not hinder commercial fishermen or any of their facilities.

Moss Landing Commercial Fishermen's Association  
(Lillian Martins, no date)

Comment

Opposes the establishment of Elkhorn Slough Estuarine Sanctuary. The slough and the fauna are already protected by Federal, State, and local legislation, commissions, and agencies. Public funds will be used to buy land for the sanctuary that will not be for public use. No thought will be given to friends and neighbors who own land in the proposed sanctuary region and in the buffer zone nor to the loss of tax revenue on the land to be acquired or in the buffer zone. The 36 estimated land acquisition parcels include 1510 acres @ \$1940.36 per acre (total acquisition \$2,930,000). That is not near the going price in Monterey County.

Response

See General Response D and E. While it is true that the slough and fauna are covered by various regulations, the sanctuary will provide an educational/scientific management plan for the slough which does not currently exist. There will be no "buffer zones", see General Response A. The loss of tax revenue has been estimated at \$12,000.

Comment

The Marine Laboratory now has full use of the slough for "Research and Education". What possible gain would there be from designating an estuarine sanctuary?

Response

The establishment of a sanctuary would ensure the continued availability of the slough for research and education in the future as well as the present.

Comment

Increased research and visitor use could potentially produce adverse impacts on natural resources (i.e. littering, water contamination, habitat destruction, and trespassing on private lands).

Response

See General Response G.

Comment

Proposed expansion of the Moss Landing Harbor and marinas will possibly be prevented by the presence of the sanctuary. Development of a new marina in the slough will be prohibited by the sanctuary.

### Response

The expansion of Moss Harbor Landing is controlled by State laws and the local zoning plan (LCP) and will not be affected by the sanctuary. The same is true of the marina since this is also outside the sanctuary.

### Comment

Commercial and industrial uses will suffer loss of property value. Existing agricultural use will lose resale value and agricultural lands will probably discontinue that use. Conversion of vegetative land to cultivated speciality crops, such as strawberries, might be discouraged.

### Response

The present industrial use by PG&E and Kaiser will not adversely affect the sanctaury or vice versa. We also believe that agricultural lands will not lose resale value, but will potentially gain in value.

### Comment

A primary cause of air pollution is motor vehicle emission. Visitors attracted to the sanctuary will increase emissions.

### Response

Given the strict California laws on air pollution we feel that the State will ensure compliance with these laws. See General Response A, also.

### Moss Landing Harbor District

George F. Humphries, (Public Hearing Statement, 6/20/79)

### Comment

The DEIS will become obsolete when the rules and regulations for the sanctuary are drawn up. The Coastal Commissions and the sanctuary will go far beyond its limits.

### Response

The estuarine sanctuary proposal involves land acquisition of 1,500 acres, whereas the California Coastal Commission has regulatory powers over the entire California Coastal Zone.

### Comment

The Monterey location of the public hearings, with such poor facilities, was not good salesmanship for the sanctuary.

#### Response

See General Response B. We agree that a larger facility would have been better to handle the large number of people.

#### Comment

More access to the sanctuary will increase pollution. You'll have to get rid of the hawks to save the clapper rails. This would be going against the balance of nature.

#### Response

See General Response G.

#### Comment

The President of the Moss Landing Harbor Commission should not be on the Governing Board of the Sanctuary. A Harbor Board Commissioner, selected by the fellow commissioners should be on the Board.

#### Response

The composition of the Advisory Committee is designed to provide maximum representation for all interests, which includes the Chairman of the Moss Landing Harbor District. The Chairman may appoint any fellow commissioner to represent the Commission on the Elkhorn Slough Advisory Committee.

#### Moss Landing Harbor District

(Werner D. Meyerberg, Attorney, Public Hearing Statement, June 20, 1979)

#### Comment

Regulations require 30 days notice of public hearing and distribution of DEIS.

#### Response

A public hearing cannot be held any sooner than 30 days after OCZM issues a statement, but can be held within 15 days public notice. (See §921.21 of Appendix 1 and §1506.6 of the NEPA Regulations.)

#### Comment

The Moss Landing Board found out about the hearing by accident and received a copy of the document at the 6/20/79 hearing.

Response

A copy was mailed in May. We appologize for the inconvenience resulting from your not receiving it.

Comment

The extension of the comment period to July 11 (15 days) is not sufficient. A 30-day extension should be granted.

Response

See General Response B.

Comment

A public hearing should be held in the "area affected" as close to the Slough as possible.

Response

We agree, and subsequently two Public Meetings were held in Castroville. See General Response B.

Comment

The Moss Landing Board of Commissioners passed a resolution stating that the sanctuary will:

- deprive people of use of land
- add unneeded layer of government
- not afford additional protection to fish & wildlife not covered by present laws and government
- inhibit commercial and agricultural activities
- based on experience in Coos Bay, Oregon, impose restrictions precluding expansion or maintenance, and restrictions on pleasure boaters and fishermen.

The Harbor Commissioners oppose establishment of the sanctuary.

Response

We accept the resolution as an expression of your concerns and interest but do not feel it accurately describes the impacts of the the proposed estuarine sanctuary as outlined in the FEIS.

Moss Landing Harbor District

William Wimmer, Manager (Summary of Comments made at  
June 20th hearing, June 22 meeting and July 10th meeting)

Comment

(on June 20, 1979)

Requested an extension of three weeks for submitting comments, and requested a meeting be held in the vicinity of the project with adequate public notice.

Response

The comment period was extended 15 days and two meetings were held.

Comment

The only endangered species in the Elkhorn Slough area are people.... who don't need more bureaucracy.

Response

"Bureacracy" over lands outside the proposed boundaries will not occur. Within the boundaries, efficient management is the goal.

Comment

Present and former agricultural lands will be lost (p.20-DEIS) by imposing regulation. Farming helps provide nutrients for the slough.

Response

See General Response A.

Comment

The statement that the no-action alternative is contrary to the public interest is inaccurate.

Response

The FEIS documents the benefits to the public.

Moss Landing Marine Laboratories

(Gregor M. Cailliet, Ph.D., 6/6/79, 7/9/79, Public Meeting Statement, 7/11/79)

Comment

The DEIS is accurate and presentd potential impact. Supports the proposal for the Elkhorn Slough Estuarine Sanctuary as a professor of biology, a citizen, and a resident of Monterey County. The Estuarine Sanctuary plan

is important for maintenance and enhancement of breeding areas of commercially important species. The sanctuary will not affect commercial fisheries in Monterey Bay nor normal harbor activities of commercial and recreational vessels. There will be positive impacts on research, education, public access, and economy (from increased involvement and enrollment by students studying the slough). Supports protection of disappearing wetlands; we must utilize funds now available and protect wildlife habitats from development pressure.

Response

Comment accepted.

Comment

Sanctuary designation may be necessary to protect the fish in the slough for commercial fisheries. The Sanctuary can enhance recreational and educational opportunities for people.

Response

Comment accepted.

Comment

Fish species, such as the Pacific Herring and the Northern Anchovy, as well as the English Sole, need sanctuary protection.

Response

Comment accepted.

Comment

Studies show that several commercial species of fish utilize Elkhorn Slough waters, tidal creeks, and salt marshes in great numbers at least during some portion of their lives. Sanctuary status would enhance and protect use of the slough by fish, and would allow further study on the slough-dependence of these species. The slough serves three main roles in the life history of commercially important fish: as an area where some larvae grow and thrive, as an area where several species of fish undergo a considerable portion of their reproductive activities, and as an area where juvenile individuals of commercially important species aggregate to feed. It is difficult to estimate the commercial value of Elkhorn Slough to local commercial fisheries. The slough must be of some significant value to commercial fisheries in Monterey Bay because of the 41,700,000 pounds of fish, worth about \$4,300,000, landed in Monterey Bay in 1974, 41% of the poundage, or 25% of the total value, was represented by fish that spend part of their lives in the slough. Further study will refine these estimates, but it appears that Elkhorn Slough waters help produce a considerable amount of income for the commercial fishing industry. Elkhorn Slough should be seriously considered as California's Estuarine Sanctuary to provide education and research opportunities to citizens and educators alike.

Response

Comment accepted.

Moss Landing Marine Laboratories

(W.W. Broenkow, Professor of Oceanography, 5/25/79)

Comment

Supports establishment of Elkhorn Slough Estuarine Sanctuary, noting that the slough is and continues to be of considerable importance to teaching programs in oceanography at Moss Landing Marine Laboratories. It is also the focus of continuing research. Without sanctuary status, both teaching and research will be reduced or hampered through development. The slough has unique chemical and physical features; there is little interchange of water between the slough and the Bay, so there should be little negative impact of harbor development on Elkhorn Slough.

Response

Comment accepted.

Moss Landing Marine Laboratory

(Elaine Goepfert, 7/6/79)

Comment

As a student and employee at Moss Landing Marine Laboratory, feels direct concern for preserving Elkhorn Slough for research and teaching. The Laboratory's use of the slough has been expanding and long term experimentation has begun. Elkhorn Slough is the only habitat of its kind between San Francisco and Morro Bay, but its relatively undisturbed character is endangered by development pressure. Notes concern about an apparent collapse of the mudflats near the harbor, probably due to dredging, and about expanded home construction in the slough drainage basin and subsequent increase in sediment runoff, infauna population crash, and detrimental consequence to Monterey Bay fishing industry. Notes that the slough is an important breeding and/or wintering ground for many bird species and is the habitat of the endangered Clapper rail and Santa Cruz long-toed salamander and the rare estuarine snail Tryonia imitator. Requests support for preserving this unique habitat and the species that depend upon it for all who wish to understand the interaction between living things and their environment.

Response

Comment accepted. To date, the Santa Cruz long-toed salamander has not been documented to OCZM within the proposed sanctuary boundaries.



Moss Landing Marine Laboratories

(Thomas E. Harvey, 6/20/79, Public Hearing Statement, 6/20/79)

Comment

A graduate student at MLML, Harvey is involved with research on breeding sea-birds at the slough. He is presently conducting a population survey of endangered California clapper rails for the CF&G. At least two individuals were seen in early 1979 and breeding may have occurred. The population of California clapper rail is estimated at 6,000(1979), with 90% in the South San Francisco Bay. Harvey supports Elkhorn Slough as an estuarine sanctuary.

Response

Comment accepted.

Comment

Research indicates that salt ponds are a critical part of the slough environment and should be included in sanctuary boundaries.

Response

Comment accepted, however salt ponds are within the boundary of the Fish and Wildlife Refuge.

Moss Landing Marine Laboratories

(Ann C. Hurley, 6/20/79, Public Hearing Statement, 6/20/79)

Comment

Supports designation of Elkhorn Slough as an estuarine sanctuary. It is necessary to preserve valuable wildlife habitats which serve as breeding and wintering areas for many species. The slough is a nursery ground for important commercial fisheries of the area. It is crucial that funding be given at this time since there are many development pressures, especially harbor expansion and home construction.

Response

Comment accepted.

Moss Landing Marine Laboratories

(John H. Martin, Director, 7/9/79, Public Hearing Statement, 6/20/79)

Comment

OCZM should make Elkhorn Slough an estuarine sanctuary for education and research. Notes that salt marshes in Connecticut are now parking lots and warns against a similar fate for Elkhorn Slough. Opposition to the proposal is from local landowners and business owners who fear government control over their activities and who have spread rumors and have managed to scare other individuals into supporting their cause.

Response

Comment accepted regarding sanctuary. However, all comments are considered by OCZM.

Moss Landing Marine Laboratories

(James Nybakken, Professor, 6/11/79, Public Hearing Statement, 6/20/79)

Comment

Would like to go on record in strong support of the establishment of this sanctuary. Elkhorn Slough is the only habitat of its type between Moro Bay and San Francisco Bay and functions as a repository for a number of species not found elsewhere in the area. Areas like the slough are lacking and needed for long term study.

Response

Comment accepted.

Comment

The Tryonia imitator, a small snail, is currently being considered for addition to the endangered species list and occurs only in Elkhorn Slough and in two other areas in the State.

Response

Comment accepted.

Comment

The major clam species taken in the sports fishery, the gopher and the Washington, are not found elsewhere in this area. A positive impact of this sanctuary would be the protection of a unique habitat in central California.

Response

Comment accepted.

Comment

Another positive aspect of the sanctuary designation will be to offer increased access to the public and possibly a positive economic benefit to the area. Such access is now restricted to the Highway 1 Bridge and Kirby Park. Increased access will also go far toward enhancing public appreciation of estuaries.

Responses

Comment accepted. Also see General Response G.

Comment

Sanctuary status will not have any deleterious effect on the current normal harbor activities. The Sanctuary should enhance commercial fisheries by protecting the nursery grounds, which might otherwise be degraded by development.

Response

Comment accepted. Also see General Response A.

Comment

Sanctuary status is of scientific, economic, and public interest. State money is available now, but may not be in the future.

Response

Comment accepted.

Moss Landing Marine Labs

Bruce Stewart (Public Hearing Statement, June 20, 1979)

Comment

The full potential for Elkhorn Slough as a natural field laboratory has not been realized.

Response

Comment accepted.

Comment

Many requests for science tours of the slough cannot be filled due to limited access and funding. Improved public access and careful management of the slough will provide a resource for schools and community residents. The planned visitors' center is an important element of the sanctuary plan.

Response

Comment accepted.

G. Victor Morejohn

Moss Landing Marine Laboratories

(Written Comment and Public Hearing Statement, 6/20/79)

Comment

Elkhorn Slough is an excellent place for ecological studies of estuarine fish, birds, and mammals. The shorebird populations include numerous species of migrant birds and the slough supports the only mainland rookery of the Brown Pelican. The Harbor Seal uses the slough as do other marine mammals. The long toed salamander is found in fresh water drainage area of the slough, and the endangered clapper rail is found in the slough. The ecological integrity of this unspoiled area must be maintained so we can study and learn about the interrelationships. The DEIS is well done. Elkhorn Slough merits preservation as an estuarine sanctuary.

Response

Comment accepted.

Michael Foster

Moss Landing Marine Laboratories

(Public Hearing Statement, 6/20/79)

Comment

Supports designation of the sanctuary and feels the DEIS is generally accurate and presents potential impacts well. Feels that the sanctuary will preserve and enhance the commercial fisheries in Monterey Bay, will not interfere with harbor activities, and will provide a natural laboratory with educational benefits. Feels that further consideration of water quality in the sanctuary is needed and it should be given priority to the management framework. Feels that if the sanctuary proposal fails, California may not support protection of other wetlands, especially in light of fiscal constraints.

Response

Comment accepted.

William Murtha, (undated)

Comment:

Government control must stop. The Sanctuary is a mistake.

Response:

Your comments will be taken into account by the Office of Coastal Zone Management before a decision is made.

Natural Resources Defense Council, Inc.  
(Peter S. Holmes, 7/11/79)

Comment

Elkhorn Slough merits the maximum protection possible under the Estuarine Sanctuary Program as a typical Californian class estuary.

Response

Comment accepted.

Comment

Is there potential conflict in future management of the sanctuary and adjacent Fish and Wildlife Service proposed wildlife refuge? "Coordinated management policies" should be initiated immediately in order to identify and work out conflicts. The role of the Moss Landing Harbor District (MLHD) must be explicitly defined to avoid potential conflicting activities. Interagency relationships must be thoroughly analyzed and defined in the FEIS so that prohibited, permitted, and restricted uses within the sanctuary can also be included to facilitate predictability of management.

Response

The sanctuary and the USF&WS refuge will work together to help protect the slough's watershed. There is no conflict. The USF&WS, MLHD, and others all have representatives on the Sanctuary Advisory Committee to assure a "coordinated management policy."

The Nature Conservancy  
(Diane Porter Cooley, Watsonville, CA. 6/16/79)

Comment

For over a century her family has lived on the edge of Elkhorn Slough and have come to know and deeply appreciate its worth, not only as a home and an evergreen summer pasture, but more significantly, as a vast ecological link of life between land, fresh water and sea. They contributed their property to the Nature Conservancy as a gift of personal affirmation and emphasis to the overwhelming testimony of the immense biological significance of the slough. Elkhorn Slough must be protected as an estuarine sanctuary to protect and assure good stewardship of the rich and diverse habitat of this natural heritage.

Response

Comment accepted, and the contribution of land indicates a strong personal attachment to its preservation within the slough system.

The Nature Conservancy

(Thomas K. McCarthy (Public Hearing Statement, 6/20/79))

Comment

The Conservancy considers the Elkhorn Slough as one of its top priority projects and is actively engaged in land acquisition on the North end of the Slough, offering additional protection outside the sanctuary's boundaries and those of the proposed national wildlife refuge.

Response

The Nature Conservancy's interest and acquisitions are appreciated.

Comment

Endorses the DEIS and the proposed Sanctuary.

Response

Comment accepted.

Comment

If the sanctuary is not designated, funds will not be available for the purchase of needed lands.

Response

The basic decision is whether or not to award a OCZM matching land acquisition grant.

Comment

Page 27 of the DEIS refers to 200 acres owned by the Conservancy. They are prepared to transfer this land to the sanctuary project.

Response

The offer is greatly appreciated and the Wildlife Conservation Board will contact the Nature Conservancy.

The Nature Conservancy  
(Steve McCormick, 6/20/79)

Comment

The DEIS prepared on the proposed Elkhorn Slough Estuarine Sanctuary is well done. The Conservancy has worked assiduously since 1971 to protect critical pieces of this environment and the DEIS appropriately recognizes the need to acquire additional acreage in the slough to ensure proper management of the area. The DEIS accurately defines the existing situation and properly assesses the effects of the proposed action. The Conservancy will assist California Fish and Game in any way it can.

Response

Comment accepted, and the offer of assistance is appreciated.

Nature Conservancy  
(Elkhorn Slough Management Committee, John S. Warriner, Chairman, 6/14/79)

Comment

The slough should be given sanctuary status as soon as possible. As a feeding and wintering ground for migratory birds it is unsurpassed for many miles along the coast in either direction. The snowy plover, gulls, terns, avocets, and stilts that live on the slough are threatened species. The wildlife values along the slough cannot be protected without sanctuary designation. There are continued pressures for incompatible uses of the slough now and it cannot be expected that the demands will change in the future.

Response

Comment accepted.

Comment

On page 31, F and G, "Wildlife and Marine Resources," no reference is made to the reproduction aspects of the area. The loss of breeding ground suffered includes the demise of fauna, decreased food supply for animals and man, and loss of jobs in the fishing industry. (Example: The nesting area of the endangered clapper rail, as well as the sea hare.)

Response

Comment accepted regarding reproduction aspects, but not added to FEIS because of limited value for decision making.

The Nature Conservancy and Point Reyes Bird Sanctuary  
John Warriner (Public Hearing Statement, 6/20/79)

Comment

The salt ponds in the slough should be included in any sanctuary boundary because of their importance as a breeding area.

Response

The salt ponds have been included within the Wildlife Refuge.

Northern California Coastal Trust  
Al Haynes (Public Hearing Statement, 6/20/79)

Comment

Feels that conflicts over the sanctuary are based on varying perspectives of land as a commodity and land as a resource. Commercial fishermen should realize that the value of the slough lies in its protection as a sanctuary. The protection of wetlands like the slough is of the utmost importance because of the intrinsic and economic values of the species that live and breed in the slough, and for the continued long term existence of man.

Response

Comment accepted.



Robert Oleson

Oleson Ranch

(Public Hearing Statement, 6/20/79, Public Meeting Statement, 7/10/79)

Comment

Questions the impact of increased numbers of students and faculty on the slough, which was not discussed in the DEIS.

Response

See General Response G.

Comment

Notes that the Advisory Board of the areas Local Coastal Programs has not received information on the project.

Response

See General Response B.

Comment

If the State takes over the sanctuary lands, additional restriction will be placed on lands around the sanctuary, such as through a "resource protection zone" by the Coastal Commission. Is concerned about an increase in jurisdiction to protect the sanctuary, especially in San Benito County. Questions that if lands are taken over, who will care for maintenance, such as prevention of weed patches and fire hazards?

Response

See General Response A.

Comment

Does not object to the sanctuary concept if it is limited to the high water mark and is without additional restrictions beyond. As a property owner in the buffer zone, notes that property owners in the sanctuary area did not receive notice or copies of the DEIS. More studies should be conducted and information included in the DEIS before sanctuary approval.

Response

See General Responses A and E. Changes have been made to the FEIS to reflect comments and additional information.

Comment

The sanctuary may be a fire hazard, inhibit private use of herbicides/pesticides by farmers, and bring questionable impact to the area from increased student visitation. Mr. Oelson feels that coastal erosion has not been enough of a problem to warrent a sanctuary.

Response

See General Response A and G. Erosion is not a factor in establishing an estuarine sanctuary.

Comment

The sanctuary will threaten private property owners and bring too much bureaucracy into local people's lives. The effects of the sanctuary, under the California Resources Protection Zone (RPZ) Program might place too restrictive property use measures on landowners within the sanctuary buffer zone.

Response

See General Response A.

Joy B. Osborne, (6/30/79)

Comment

Elkhorn Slough should be established as an estuarine sanctuary.

Response

Comment accepted.

Pacific Grove Museum of Natural History  
(Verna L. Yaden, Director, 6/23/79)

Comment

Supports the OCZM grant application for the purchase of land and establishment of the proposed Elkhorn Slough Estuarine Sanctuary. The slough is a valuable resource having influence on wildlife populations of many types and its watercourses are habitats for waterfowl, shorebirds, marine fishes, and invertebrates. Elkhorn Slough is one of the few relatively unspoiled wetlands remaining in California and its loss to industrial or urban development would have dire effects on wildlife species requiring its resources. Preservation of the slough will promote many future benefits to the local economy, such as passive recreation and controlled hunting.

Response

Comment accepted.

Donald Phipps

Pacific Gas and Electric  
(Public Hearing Statement-6/20/79)

Comment

Notes that the Moss Landing Facility represents 20% of company's generating capacity and serves a vital and indispensable role in supplying energy for which there is no substitute. The facility is important to the public health and welfare of northern California.

Response

Comment accepted, and PG & E's energy contribution is recognized.

Comment

Feels that there have been no documented adverse impacts on Elkhorn Slough from this facility in the 30 year period of its existence and that the DEIS should state that PG&E's continued land use at Moss Landing is not incompatible with sanctuary. Feels that the warm water discharge from the facility is beneficial due to straining of debris, and the aquaculture industry from the discharge.

Response

"PG&E's continued land use at Moss Landing is not incompatible with the proposed estuarine sanctuary" has been added to the FEIS.

Comment

Note that PG&E's facility is not accurately described in the DEIS (p.21) It should read:

"Two large industrial facilities are located on the South side and one adjacent to the proposed sanctuary. PG&E has operated major electrical generator and transmission facilities adjacent to the proposed sanctuary since 1950. These facilities include the seven large generating units plus 5,750,000 barrels of fuel storage, switchyards, transformers, and extensive transmission lines. Transmission lines are located in easement across lands which are proposed for acquisition. No adverse impact on the ecology of Elkhorn Slough has resulted from the existence of these facilities."

Response

Proposed language added to the FEIS except the last sentence, which is opinion rather than fact.  
Language above basically reflects this statement.

Comment

We concur with the multi-disciplinary approach to management, but do not agree with the makeup of committees, representatives of industries, and agricultural associations whose operations will be affected.

Response

Comment accepted. See General Response I for changes.

Comment

The description of "disastrous" effects of the no action alternative is an unsupported conclusion. The slough is protected by the Coastal Commission, the Department of Fish & Game, and certain laws.

Response

Word "disastrous" deleted.

Point Reyes Bird Observatory

(Deborah A. Clark, Ph.D., Director, 6/13/79)

Comment

Designation of the proposed Elkhorn Slough Estuarine Sanctuary is important. The slough is an outstanding site--one of the few estuarine habitats left on the U.S. Pacific coast--and is an exceptional wildlife resource and important nursery, utilized by many bird populations and fish species.

Response

Comment accepted.

Bob Ramer

(Watsonville, Ca., 7/1/9)

Comment

OCZM has done fine work on the Elkhorn Slough DEIS. Supports the proposed estuarine sanctuary. Elkhorn Slough plays a vital role in the ecology of the central California coast and failure to protect the slough would be a crime against mankind as well as nature.

Response

Comment accepted.

Comment

In certain cases, manipulation of the environment by man is not always bad. The slough contains salt evaporation ponds which, while being anthropogenic modifications of the "original" slough environment, are highly productive and vital to migrating shorebirds and "wintering" brown pelicans as feeding and roosting areas. The salt ponds should be preserved in any sanctuary plan.

Response

We agree with the statement; however, the salt ponds are not within the proposed estuarine sanctuary boundaries. They are within the proposed U.S. Fish and Wildlife Refuge.

Comment

On page 31, section F, a comment is made that 138 bird species have been listed for the slough. This is a conservative estimate; several field sightings, including those published in American Birds, record over 200 species. More intensive field work is needed.

Response

Comment accepted. We recommend such field work if the estuarine sanctuary is established.

William Reese, (6/20/79)

Comment

The Elkhorn Slough Estuarine area is an important resource. Tens of thousands of birds use the slough as a resting spot on fall and spring migrations, as well as those who overwinter alone in the slough. The slough and its surrounding area should be put under some form of protection. Elkhorn Slough is an ideal place to establish a management area since it is minimally developed at present.

Response

Comment accepted.

C. "Sam" Samples  
(Public Hearing Statement, 6/22/79)

Comment

The problem of government began in 1969 when the country was broken down into Federal regions. Is opposed to the sanctuary and will fight it.

Response

We are not aware of the problems with regional Federal offices. Your concerns will be considered by the Assistant Administrator for Coastal Zone Management before designation.

Dennis Sandeneby  
(Seaside, Ca. 6/18/79)

Comment

Elkhorn Slough should remain in its natural state with as little disturbance as possible. Elkhorn Slough is a valuable spawning area for fish, birds, and invertebrates and one of the last strongholds for several endangered species. Loss of the slough would be incalculable.

Response

Comment accepted.

Santa Catalina School  
(Ferdinand S. Ruth, Marine Biologist, 7/8/79)

Comment

The proposed Elkhorn Slough Estuarine Sanctuary is important. It must be protected as an educational resource used for many significant studies of marine ecology and natural history, and as a nurturing ground for invertebrates and planktonic organisms that are so important in the food chain. Through education, those who oppose the sanctuary (i.e., fishermen) may change their views.

Response

Comment accepted.

Santa Clara Valley Audubon Society, Inc.  
(Ferol Burris, Conservation Chairman, 7/6/79)

Comment

A majority of California's wetlands are irrevocably converted to developers' uses. Elkhorn Slough is in a unique, pristine state of priceless value and all efforts should be made to purchase the proposed lands. This wetland habitat is a wildlife area for breeding, feeding, and rearing young, a nesting and feeding area for migratory species, and a wintering ground. There are additional values of the slough to education, research, commercial fishermen, and to birders. Preservation of this incomparable area as a sanctuary is necessary to insure unimpaired benefits to those who use it today and for future generations.

Response

Comment accepted.

Santa Cruz Bird Club

Irene L. Manicci, Conservation Director (Public  
Hearing Statement, June 20, 1979)

Comment

As a wildlife habitat, Elkhorn Slough is one of the most important coastal estuaries and salt-brackish marshes remaining in California. Thousands of birds use the Slough. Elkhorn Slough is the first suitable place for migratory waterfowl after they leave San Francisco. Caspian and Forestry terns have established nesting colonies on dikes and islands in the Slough.

Response

Comment accepted.

Anne S. Sawhill  
(Carmel Valley, Ca., 7/16/79)

Comment

Protect Elkhorn Slough. The abuse of dredging and pollution could jeopardize this valuable breeding area.

Response

Comment accepted.



Walter L. Schroeder  
(Public Hearing Statement, 6/20/79)

Comment

No consideration was given to man in the ecology of the slough. People in the area are already protecting the slough and allowing for educational uses.

Response

See General Response E.

Mrs. Beverly Shea  
(Moss Landing, Ca., 7/8/79)

Comment

Encourages sanctuary status for Elkhorn Slough. This is a last chance to preserve the slough intact before it becomes developed. The estuarine environment must be protected as a spawning ground and the harbor life-style must be protected from projects such as tanker terminals. It must be protected from CALTRANS's proposal to reroute Highway 1. Although there exist protests from landowners and fishermen, the long range reward of granting sanctuary status will become more obvious in the future.

Response

Comment accepted. However, see General Response H, which discusses Highway 1.

Russell E. Shea  
(Moss Landing, Ca., 7/9/79)

Comment

Expressed support for the proposed Elkhorn Slough Estuarine Sanctuary. Sanctuary status is essential to preserve fragile and important habitats that might otherwise be encroached upon and lost forever. The slough is a valuable ecological asset, for personal enjoyment and as a wildlife habitat, that should be protected from industrial development.

Response

Comment accepted.

Sierra Club

Janie Fagan

(Public Hearing Statement, 6/20/79)

Comment

Supports the estuarine sanctuary as the only means of preserving this valuable piece of land.

Response

Comment accepted.

Comment

Notes that the DEIS neglected to mention the long-toed salamander, which is found in fresh water habitats of the proposed sanctuary boundary and the DEIS also underestimated the number of birds. Notes that as many as 4,000 Brown pelicans, or 1/3 of those found in the Western United States, reside here. Disputes PG&E's no adverse affect claim, noting that its facility site was formerly a heron rookery.

Response

Information available to OCZM does not list the presence of the long-toed salamander within proposed boundary. It may be that the salamander exist in Elkhorn Slough but, because of uncertainty, it is not felt essential to include it in the FEIS.

Stephanie Singer

(Santa Cruz, Ca., 7/7/79)

Comment

The DEIS adequately states the importance of Elkhorn Slough as a natural ecosystem and wildlife habitat area. Opposition to the proposal as expressed at the hearings may reflect the popularity of the anti-government movement because people of the State as a whole support the proposal.

Response

Comment accepted. However, we make no judgements regarding the motives of those who support or oppose the proposal.

Ronald & Genevieve Smith  
(Gilroy, Ca., 7/2/79)

Comment

Creation of Elkhorn Slough Estuarine Sanctuary is wrong because the Government will deprive landowners of the use of their land, (agriculture and home building). The Smith property, located a mile from the slough, has already experienced restrictions from the California Coastal Commission. Arbitrary government interference that can take over private property must be stopped.

Response

See General Responses A and D.

Robert L. Speer, (6/22/79)

Comment

The entire 70 square miles of watershed will be ruled by the Coastal Commission if the sanctuary is designated. Lands outside the land targeted for sanctuary designation should be free for normal uses, controlled only by existing Monterey County zoning codes.

Response

See General Response A.

Jo Stallard, 6/19/79)

Comment

To not fully protect the Elkhorn Slough area now will be a great mistake. Action must be taken to assure the formation of the Elkhorn Slough Estuarine Sanctuary as soon as possible.

Response

Comment accepted.

Gary Stelow

(Public Hearing Statement, 6/20/79)

Comment

Moss Landing fishing is a clean industry with a significant economic contribution to the area that the sanctuary will perpetuate.

Response

Comment accepted.

Comment

The Slough is important to the fishing industry which is important to the area's economy. It is less expensive to preserve the sanctuary now than it will be 10 years from now when money may not be available.

Response

Comment accepted.

Comment

As a lawyer, feels there are a number of ways to recover the fair value of property to be acquired.

Response

Comment accepted.

Comment

Notes that there is an advantage to managing development through establishment of a sanctuary and that the university should not have to oppose piecemeal development which impinges on the estuary.

Response

Comment accepted.

George Strazicich  
(Vancouver, B.C. 6/29/79)

Comment

States opposition to the purchase of land for the sanctuary at less than market value. Special interest groups persuade the government to take away individual's rights by forcing them to sell at less than market value. Owners are then restricted in use of lands and land values decline. This is also an indirect subsidy to purchase land without compensation to current surrounding landowners.

Response

See General Responses A and D.

David R. Suggs - Commercial Fisherman  
(Aptos, Ca., 6/22/79)

Comment

Commercial fishermen have been put under Federal control and are better off when there is little government control. The slough already has government control all around it and additional control is unnecessary. The three million dollar figure stated for the proposed sanctuary should be used for other purposes.

Response

The proposed sanctuary will not affect or regulate commercial fishing. See General Response A.

Judy E. Suggs  
(Aptos, Ca., 6/22/79)

Comment

Protests the proposed Elkhorn Slough Estuarine Sanctuary, focusing on the large sum of money allocated for this project, the fear of government control, jeopardy to privately held property, and concern for fishermen and their livelihood. Feels that the Moss Landing Marine Laboratory is adequate for the education aspects of the sanctuary plan. Fears government control on fishermen, fish buyers, shipyards, and farmers in the surrounding area.

Response

See General Responses A and E.

Ernestine M. Tarr  
(Salinas, Ca. 6/18/79)

Comment

Elkhorn Slough is truly unique and must be preserved to maintain the continuance of natural life there and eliminate encroachments on wildlife habitats.

Response

Comments accepted.

Eleanor Taylor  
Central Coast Regional Commission  
(Public Hearing Statement, 6/20/79)

Comment

DEIS is excellent in coverage and well organized; however, notes that the section on conflict of uses could be strengthened through more detailed examination of potential industrial development. Large areas around the slough are currently zoned for heavy industry and changes in operation or expansion of existing facilities could have impacts on estuarine environment. Notes that if drilling for oil takes place in response to OCS lease sale 53, impacts on the slough need to be discussed. Preliminary discussion paper shows Moss Landing as potential onshore service base. DEIS should be amended to identify potential problems arising from future development.

Response

See General Response A. It is the responsibility of the Department of the Interior to describe the potential impacts from OCS development on the surrounding land and water resources and beyond the scope of this EIS.

Save Our Shores  
(Nelson Wolfe, Public Hearing Statement, 6/20/79)

Comment

Supports the sanctuary but feels that the proposal does not reflect the complex and interdependent nature of the slough environment. Feels that acquisition of adjacent lands and water quality should be given more consideration in the sanctuary proposal.

Response

See General Response F. Funding is a constraint.

Peter Trundle  
(Watsonville Ca., 7/10/79)

Comment

(Phoned in 7/10/79 4:30 from (408)722-9689) Approves of the designation of the proposed Elkhorn Slough Estuarine Sanctuary.

Response

Comment accepted.

Dr. Marilyn Vassalo  
(Public Hearing Statement, 6/20/79)

Comment

Her studies of Elkhorn Slough as a student at Moss Landing significantly contributed to later work in San Francisco Bay, and as a college instructor she used the slough as a natural living laboratory, as do many colleges and universities in the area. Many of her students are teachers who will pass on their knowledge to their students, an extremely important endeavor, since the general public still does not understand the value of such a resource in terms of economics and education. Without sanctuary status we will lose the slough as an educational and economic resource.

Response

Comment accepted.

David W. Vollmer  
(Santa Cruz, Ca., 7/6/79)

Comment

Expressed support for preserving Elkhorn Slough.

Response

Comment accepted.



James and Cynthia Waddington  
(Monterey County)

Comment

Establishment of Elkhorn Slough Estuarine Sanctuary is important. The sanctuary would provide permanent protection to an irreplaceable spawning ground, an area of considerable scenic and educational value, and an area of economic value to Monterey Bay commercial fishery.

Response

Comment accepted.

Watsonville Chamber of Commerce  
(Edwin C. Hall, President, 7/9/79)

Comment

Opposes designation of Elkhorn Slough Estuarine Sanctuary. There will be a loss of needed agricultural production, jobs, and private property rights. Elkhorn Slough should be protected and preserved but not isolated with the designation of an estuarine sanctuary. It is now and could continue to be a fine sports, recreation and fishing area, and adjacent lands can and should remain in agricultural production.

Response

The loss of agricultural production will be small but the gain in the economy from more people visiting the area could more than offset the loss and also provide jobs. However, this obviously is not the purpose in establishing the sanctuary. The term "sanctuary" is not intended to mean isolation from the public; indeed sport fishing and limited recreation are accepted as compatible uses in the FEIS. See General Response A.

Mr. and Mrs. Alexander Weygers  
(Carmel Valley, Ca., 6/19/79)

Comment

The magnificent area of Elkhorn Slough should be secured as an Estuarine Sanctuary. This area is considered most important and valuable as an irreplaceable spawning ground for a variety of marine life. Over 150 bird species in the area should be protected.

Response

Comment accepted.

Donald J. Whitemar  
(Moss Landing, Ca., 6/26/79)

Comment

Unless proof is given explaining why the proposed Elkhorn Slough Estuarine Sanctuary benefits the people of the area, the proposal is in a bad situation. No one in the vicinity of the proposed sanctuary favors it. The slough needs protection from bureaus that have put restrictions on the area and have made it useless to everyone. More regulation is unnecessary.

Response

See General Response A. This DEIS documents the benefits to people in the area and this "comment" section includes those who favor the proposal, including property owners within the proposed boundaries.

Greg Winter  
(Public Hearing Statement, 6/20/79)

Comment

A map inside the cover showing the area implies that controls for the sanctuary will go clear to the Sierra Mountains. The proposed government bureaucracies will either close off the sanctuary or open up access so wide that it will destroy the sanctuary. The slough as it is now represents the appropriate middle ground--we don't need more government.

Response

Your concerns will be considered by the Assistant Administrator for Coastal Zone Management. See General Response C.

Vern Yadon

(Public Hearing Statement, 6/20/79)

Comment

Expresses views of a noted ornithologist, Laidlow Williams, that Moss Landing is one of the most significant natural areas in the region. Suggests that those wanting unrestrained development visit Cleveland to see the likely results. Recalled a county study committee for a deep draft harbor to be dredged in Moss Landing and states that PG&E representatives at the time were in favor of the harbor. Feels that if the sanctuary proposal is not approved, massive industrial development will probably be proposed.

Response

Regardless of an estuarine sanctuary, planning for the Moss Landing area is the major responsibility of Monterey County.

Summary of Comments from Public Meeting, Castroville, California, 7/11/79

(Note that where comments included issues addressed in the "General Response," they are not repeated here for each speaker.)

George Wells Abbott

Comment

Opposes sanctuary designation. Local governments are adequately protecting Elkhorn Slough land and the slough does not need outside governmental bodies trying to manage what is being adequately managed now.

Response

See General Response E.

Comment

The species of organisms in the slough are not unique enough to require protection.

Response

"Uniqueness" is not a major factor in the selection of an estuarine sanctuary. Its usage as a research/educational site is paramount.

Comment

The 1st District Supervisor, not the county chairman, should serve on the management board because of greater knowledge of local needs and problems.

Response

The research and education work performed can provide benefits to all of Monterey County, hence the county chairman is proposed. It is noted that the chairman may designate the 1st District Supervisor if he wishes.

Louis Calcagno (property owner within the proposed boudaries)

Comment

Establishment of a sanctuary would result in takeover of private land. What will happen to the pond on his property if the State buys it?

Response

See General Response A. The WCB will make all attempts to conclude a mutually acceptable acquisition (fee, or less than fee) for Mr. Calcagno's land with the pond.

California Coastal Council  
(Joseph Mastroianni, Executive Director)

Comment

Inadequate notice of meeting was given. Establishment of the Sanctuary will bring too much government control into the lives of the affected property owners and hurt property values. OCZM is trying to ramrod this proposal through, which may cut off the water supply to Kaiser as well as affecting Pacific Gas and Electric and decreasing revenue to local fishermen.

Response

See General Responses A, B, and D. We cannot foresee any economic losses to local fisherman through proposed estuarine sanctuary, or Kaiser's water supply.

Comment

A representative committee of all concerned should be formed to make decisions and forward them to the proper government agencies.

Response

The California Coastal Commission has basically done this by having its staff examine all sites and present them to the full Commission. The California Coastal Commission unanimously recommended designation of Elkhorn Slough as an estuarine sanctuary.

Susan Carpenter

Comment

The sanctuary should be designated. There is too much government, particularly the kind that allows sprawl and piecemeal development on the coast. Slough acquisition should prevent this.

Response

Comment accepted. Piecemeal development along the coast is the responsibility of the coastal commission and the counties. The estuarine sanctuary will not prevent such development.

Jeanette Cruysen

Comment

Personally tried (and failed) to save the life of a Great Blue Heron. If natural resources agencies cannot act to save a Heron, they cannot protect an entire slough.

Response

The story of the Great Blue Heron was very interesting. However, the California Department of Fish and Game will only have responsibility for management of the 1,500 acres proposed for acquisition.

Mr. David Crile

Comment

Concerned that sanctuary proposal is a "land grab". Favors protection of the slough, but feels that buffer zone restrictions may deny people many of their property rights.

Response

See General Response A.

Comment

The government allows pollution to occur in an area, such as the slough, and then points to it as a reason for taking land to preserve the area.

Response

See General Response A. Pollution and the acquisition of land as an estuarine sanctuary are not related.

Mr. James T. Dew

Comment

The slough needs no additional protection. Opposes sanctuary designation, which would bring too much government control.

Response

See General Responses A and E.

Don Dunsforth

Comment

P.L. 91-646 biases a land appraisal by requiring agency approval of the appraisal before the transaction.

Response

The approval process is a safeguard to avoid bias in the appraisal. The appraisal will be done by an independent appraiser who will only be influenced by market data.

Comment

The sanctuary is one more proposal with which the California Coastal Commission is misleading property owners.

Response

We feel that the FEIS accurately reflects the estuarine sanctuary proposal.

Bertha Estrada

Comment

The sanctuary will inhibit private pesticide use and bring unemployment to the area.

Response

See General Response A. We feel that employment will increase as a result of Sanctuary establishment.

Carol Falion

Comment

Will fish be protected so that fishermen will have enough to catch? People should not be railroaded on this proposal.

Response

It is expected that the proposed estuarine sanctuary will have a positive impact on fishing, especially the research that could be performed that will be beneficial to the fishing industry.

Emmett Garman

Comment

Opposes condemnation of land, and feels that the sanctuary proposal would bring this about.

Response

See General Response D.

Mr. Charlie Hagen

Comment

Opposes sanctuary proposal as it now stands. Private property rights are threatened by it. The slough should be protected, but without so much government control.

Response

See General Response A. The only governmental control that is proposed is the acquisition and management of approximately 1500 acres.

Mr. Jesus Hernandez

Comment

Favors the sanctuary as an excellent educational opportunity for the children. The area will help to give them this opportunity.

Response

Comment accepted.

Jim Josoff

Comment

The effect of the sanctuary's establishment will come in the form of a buffer zone, which will be a "secondary land grab" of private property.

Response

See General Response A.

Comment

Josoff read an article in which it is stated that estuaries are not vital to the organisms that inhabit them.

Response

This article has been questioned by many scientists.



King City Chamber of Commerce  
(Bill Burke)

Comment

Opposes sanctuary designation. Designation might prevent necessary use of pesticides on nearby private lands.

Response

See General Response A.

Monterey Bay Salt Company  
(David Miller, President)

Comment

Elkhorn Slough should be developed for recreation.

Response

There will be limited recreation within the proposed sanctuary, but not intensive recreation such as at State parks or private campgrounds.

Monterey Taxpayers' Association  
(Don Southard)

Comment

Opposes sanctuary designation as more government interference and "social engineering" with local interests.

Response

Comments will be considered by the Assistant Administrator for Coastal Zone Management during the decisionmaking process.

Moss Landing Chamber of Commerce  
(Lista York)

Comment

Opposes the sanctuary and feels that designation is against the will of the majority of the people.

Response

This position will be considered by OCZM/NOAA.

Moss Landing Harbor Commission

(J. Ward McClellan, and Public Meeting Statement, 6/22/79)

Comment

The Moss Landing Harbor Commission opposes the sanctuary proposal for Elkhorn Slough.

Response

The Assistant Administrator for Coastal Zone Management will take into account all comments and opposition to proposed sanctuary designation prior to making the final decision.

Comment

The Commission drafted a resolution based on a letter from Sam Bleicher. Mr. McClellan did not receive the DEIS until June 20.

Response

The FEIS responds to many of the concerns raised in the resolution. The DEIS was mailed to the Moss Landing Harbor District in May. We apologize for the inconvenience.

Pacific Gas and Electric Company

(Ray Hames)

Comment

This project should take into account the potential for transmission of energy in Northern California and the future expansion of facilities to meet the growing energy needs of the region.

Response

See other response to this PG&E concern.

Grace Page

Comment

The slough is already adequately accessible to research and education interests, and there is no need to buy land and establish a Sanctuary.

Response

See General Response E.

Mr. Mick Pasqual

Comment

Favors environmental protection, but opposes the taking of private land for the slough.

Response

Comment accepted. Also see General Responses A and D.

Salinas Chamber of Commerce  
(Richard Abramson)

Comment

Estuarine sanctuary designation for Elkhorn Slough is not necessary. The DEIS is inadequate; it overemphasizes natural characteristics of the slough which are not unique; and it does not address socioeconomic impacts of the sanctuary.

Response

See General Responses A and E. We feel that the FEIS addresses environmental impacts, including socioeconomic.

Eric Seastrand

Comment

Will the sanctuary bring a Federal "grab bag" and take away private property?

Response

See General Response D.

Sierra Club  
(Janie Fagen)

Comment

Most people don't care about the slough. The sanctuary proposal is a good one. It should provide for protection of property owner's rights.

Response

Comment accepted. Letters that we received supporting the slough indicate that many people do care.

Bob Speer

Comment

Opposes the Sanctuary. State coastal funds should be deleted from the appropriate budgets.

Response

The Assistant Administrator for Coastal Zone Management will take into account all comments and opposition to proposed sanctuary designation prior to making the final decision.

Ken Thayer

Comment

The sanctuary is wrong. It will only bring on more government regulation.

Response

See General Response A.

Schroeder Walters

Comment

The sanctuary is not needed. Local agencies have done well in their management of the area, and Elkhorn Slough would not be a good sanctuary candidate because there is much too much human activity.

Response

See General Response E. Human activity does not preclude an estuarine sanctuary, and the California Coastal Commission requested that Elkhorn be considered for funding by OCZM.

Watsonville Chamber of Commerce  
(Delbert Heischbech)

Comment

Doesn't oppose the sanctuary, per se, but feels that the DEIS is inadequate in that it does not explain how the Moss Harbor Commission contributed to the loss of steelhead and salmon and because socio-economic impacts are not addressed. More time should be taken to do an adequate EIS and meanwhile the slough should be maintained as it is.

### Response

We are somewhat confused about the loss of steelhead and salmon in relation to the Moss Landing Harbor District, but do not feel that there is a relationship to the proposed sanctuary. The FEIS has several changes in response to comments received on the DEIS.

Watsonville Chamber of Commerce  
(Sherrill Watson, Manager)

### Comment

The Chamber opposes sanctuary designation and feels that it will threaten private property rights. Watson presented a statement of opposition to the proposed sanctuary.

### Response

The Chamber's concern and the statement will be considered by the Assistant Administrator for Coastal Zone Management in the decisionmaking process.

Clare Carey Willard

### Comment

Opposes sanctuary. Its creation will threaten property owners and result in unemployed fishermen. The sanctuary proposal is bureaucratic harassment.

### Response

See General Response A. We cannot envision any impact of the sanctuary that will result in unemployed fishermen.

Bill Wimmer

### Comment

Opposes establishment of the Estuarine Sanctuary. It would result in a complete government takeover of private land.

### Response

See General Response A.

Allan Wyatt

Comment

Property owners, in their opposition to the sanctuary, have blown things out of proportion. Water from underground goes to the slough and we depend on this water. It must be protected.

Response

All comments will be considered.

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